Gameplay

Overview

NOT QUITE ROCKET SCIENCE: A PORTAL OVERVIEW

You awaken in a cold, sterile room. It’s barren except for a toilet, the bed pod from which you arose, and a radio playing a chipper tune that seems completely out of place in your spartan surroundings. You have no idea who you are or why you’re here, but it’s clear that something isn’t right—everything around you is in a state of disrepair, and the monotonous, synthesized voice that’s gently prodding you out of your chamber doesn’t seem to be quite all there.

It is clear, however, that you have some high-tech toys at your disposal. For better or worse, this unhinged artificial intelligence is apparently your only shot of getting out of wherever it is you are in one piece, and given how crazy things are looking, you’re going to need all the help you can get.

In the world of Portal, you’re a human rat trapped in a high-tech maze, and you need lightning reflexes and a whip-crack mind to navigate through it. Luckily, you also have science on your side...sometimes, anyway.

Gameplay

Characters

The Aperture Science Computer-Aided Enrichment Center is a lonely place, and this is compounded by the fact that you have no idea who you are, why you're there, or how long you've been in suspended animation. You're not completely alone, though; GLaDOS, an artificial intelligence whose positronic brain has gone kaput, is there to keep you company. The only problem is that it's sometimes hard to tell if "she" is trying to help you get out, or do you in completely.

Chell

Through some unfortunate stroke of luck, this young woman has found herself trapped in the Aperture Science Computer-Aided Enrichment Center. She has no idea why she's there, nor how long her "brief detention in the relaxation vault" has lasted. Her only guide is a clearly damaged and/or deranged artificial intelligence named GLaDOS, who is intent on putting her through a battery of tests seemingly designed to shatter our notions of space and geometry.

Your character's identity remains a mystery throughout the game, but if you play close attention to GLaDOS's nutty ramblings, you can pick up a couple of clues. For instance, in a moment of screwy programming, GLaDOS reminds listeners that the "Aperture Science Bring-Your-Daughter-to-Work Day is the perfect time to have her tested." Given that Chell is a grown woman at the outset of the game, she's probably been under for a while if she was indeed captured during said program. At one point, GLaDOS also calls her a "bitter, unlikable loner whosepassing shall not be mourned." Given the context in which she says that, however, you would hardly call her unbiased.

Those things attached to her legs, by the way, are cybernetic knee enhancements. Considering how often Chell is called upon to fall from high distances, they're a definite necessity in her line of "work."

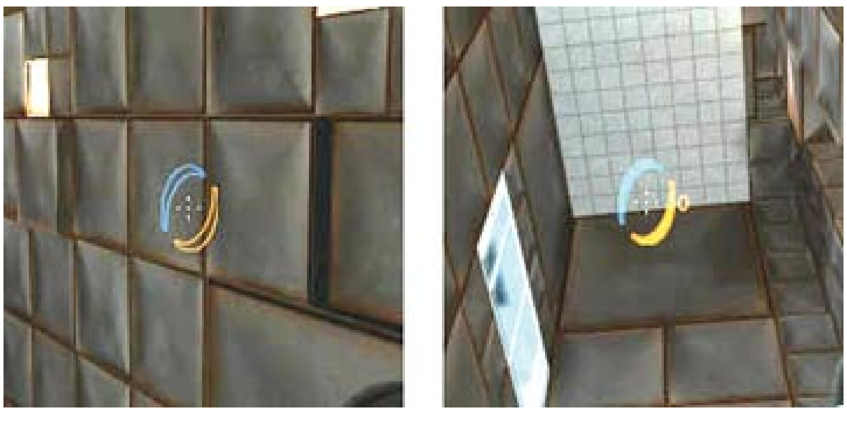
GLaDOS

GLaDOS, an acronym for Genetic Lifeform and Disk Operation System, is the deranged artificial intelligence that has taken control of the Aperture Science Computer-Aided Enrichment Center. How "she" arrived at this position is unknown, but it probably has something to do with the deadly neurotoxin that she mentions when the protagonist finally meets her "face"-to-face. Some of her programming, though, still appears to be functioning as normal, as evidenced by how helpful she could be when guiding her test subject through the Enrichment Center's multitude of chambers.

In GLaDOS' scrambled silicon brain, mankind's highest ambition is to acquire "cake." As such, she periodically reminds the protagonist that successful completion of her tests will result in a cake, baked just for her, to commemorate her triumph. A solid incentive most definitely, but it quickly becomes evident that GLaDOS's notion of "cake" may differ from our own; in other words, will the protagonist be the recipient of a delicious, freshly-baked cake, or simply one item in a long list of ingredients? Here's a hint: The only way to safely dispose of the Aperture Science Handheld Portal Device is to incinerate it. And cakes require high temperatures to bake.

Apparatuses

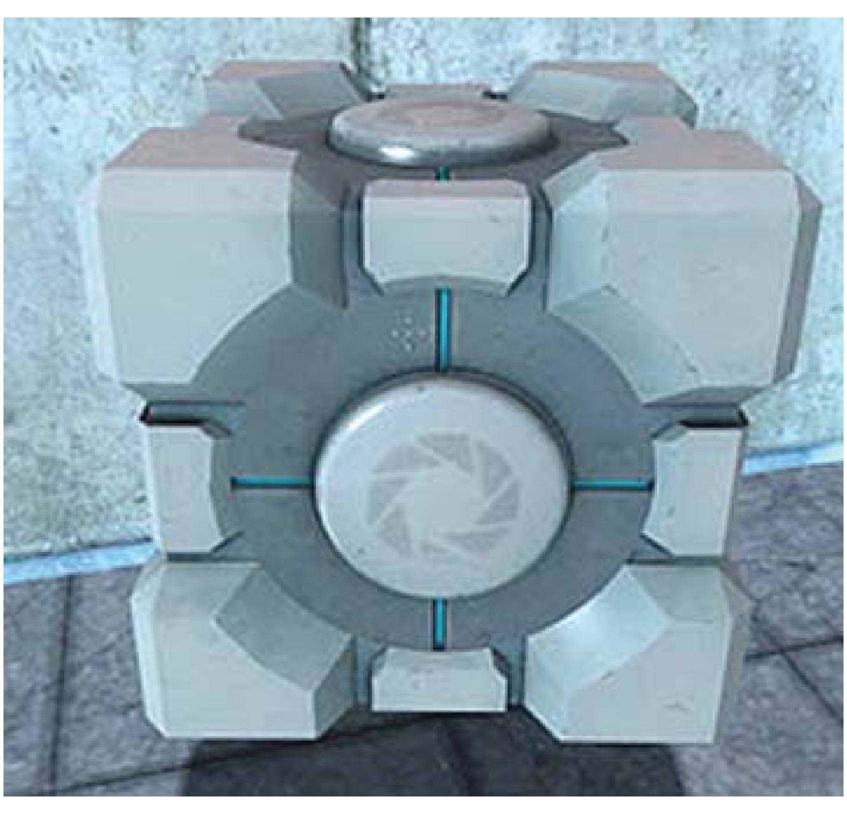
From the looks of it, you're going to be spending quite a bit of time in the Aperture Science Computer-Aided Enrichment Center. Thus, it's a good idea to familiarize yourself with the equipment they use to perform their wondrous brand of science.



The reticle on the left indicates that you can't open a portal on that surface. The one on the right with the filled outline indicates that it's A-OK.

Aperture Science Handheld Portal Device

This "portal gun" is your primary means of navigating the mind-bending environments you encounter in the Enrichment Center. While the science behind its operation is probably impossible for you to comprehend, its functions are simple: hit FIRING MODE 1 for a blue portal, and FIRING MODE 2 for a orange portal. When you enter a blue portal, you'll exit through a orange portal, and vice versa. The portal gun's oval-shaped reticle is comprised of two half circles, one blue and the other orange, corresponding to each color of portal. You'll see a smaller oval next to the side that's been most recently fired; this is useful during fast-paced puzzles. You can also determine whether you can open a portal on a given surface simply by looking at the reticle—if the outline of the oval is filled in, fire away, but if it's is empty, you're going to have to find another way.



Weighted Storage Cube

These invaluable objects are scattered all throughout the Enrichment Center's test chambers. Use them to hold down buttons, deflect energy balls (see Ball Launchers and Catchers), smash turrets, and as steps to reach elevated surfaces that portals can't get you to. If you happen to inadvertently dispose of one (by, say, dropping it into a pool of goo), you can usually find a replacement at the nearest Aperture Science Vital Apparatus Vent.

Weighted Companion Cube

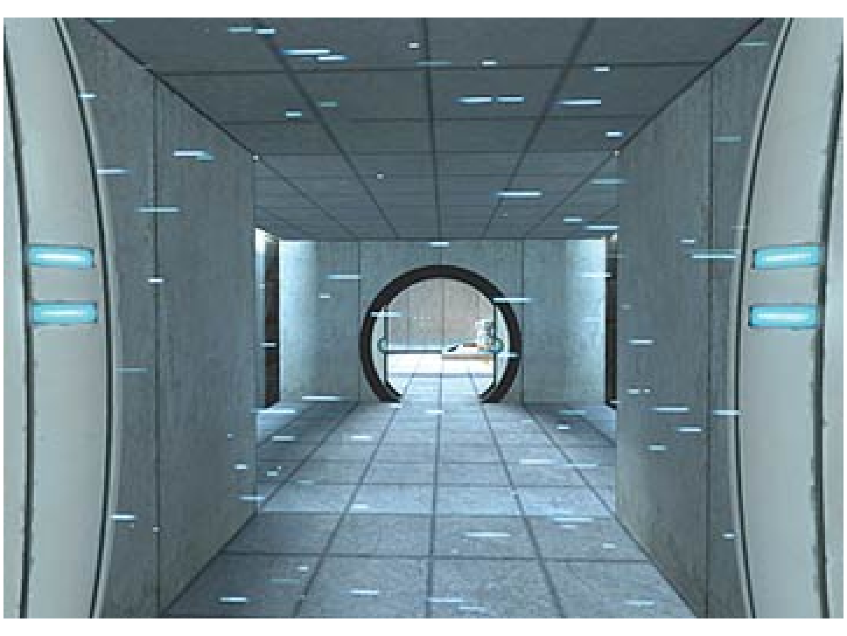
The Weighted Companion Cube is, for all intents and purposes, identical to any other Storage Cube you encounter, except for the charming hearts emblazoned on its six sides. These were designed to engender nurturing feelings in test subjects, for the psychological portion of Test Chamber 17's exercise. Don't get too attached to your "friend," though....

Ball Launchers and Catchers

These are among the deadliest testing devices in the Enrichment Center, but also some of the most vital when it comes to solving certain puzzles. Ball Launchers periodically emit a pulsating orb of energy that travels slowly in a straight line and bounces off of flat surfaces for a set amount of time before dissipating. Your job is typically to goad these energy balls—which are deadly to the touch—toward a Ball Catcher by means of portals and/or Storage Cubes in order to trigger some sort of puzzle-related event, such as opening a door or activating a lift. When an energy ball comes into contact with a Catcher, the Launcher that emitted it shuts down.

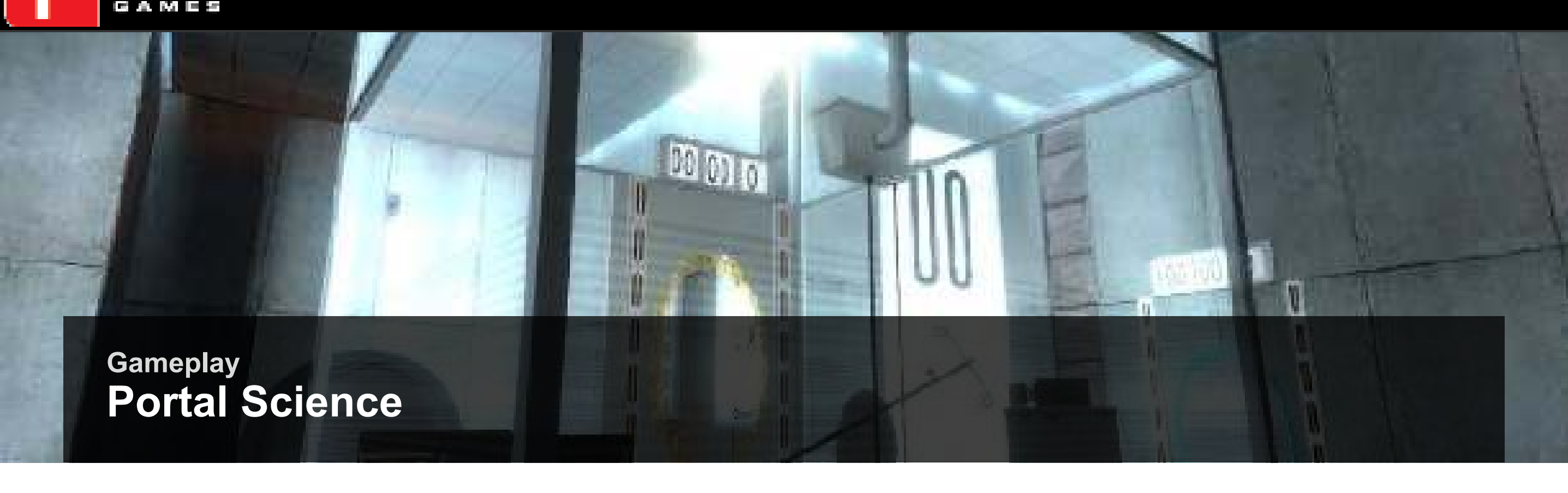
Turrets

Although these turrets were originally designed to populate obstacle courses for the testing of military androids, you encounter more than a few of them during your stint as an Enrichment Center test subject. Unfortunately, they don't seem to care whether their targets are organic or synthetic: If you come into contact with their laser sights, you receive an indiscriminate barrage of machine gun fire. Luckily, clever use of your portal gun should provide you with ample methods of dispatching them. You can simply teleport to their flanks and tip them over, drop Storage Cubes on their heads via ceiling-deployed portals, or creatively coax energy balls into making contact with them. Once you've figured out to foil one, though, don't feel compelled to do so immediately—they say the funniest things when you play a bit of peekaboo with them.



Aperture Science Material Emancipation Grid

These transparent energy fields are normally used to mark the end of a level, but they're occasionally found within the test chambers as puzzle elements. When you encounter one in this context, keep in mind that any object you carry through it will disintegrate. Furthermore, any portals you place while through an Emancipation Grid will disappear when you cross to the other side. Usually, you'll have to concoct some clever way to get around this restriction.

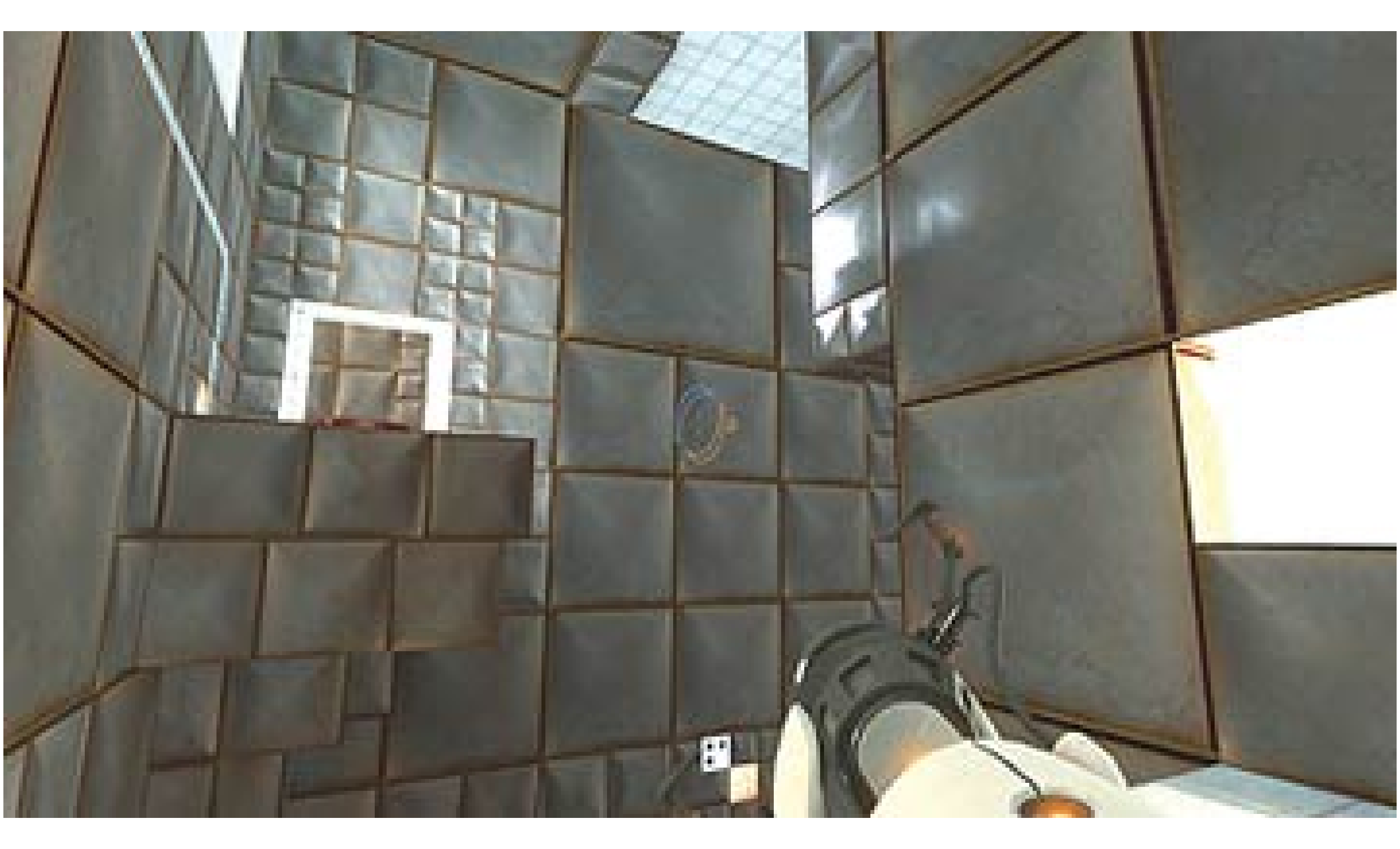


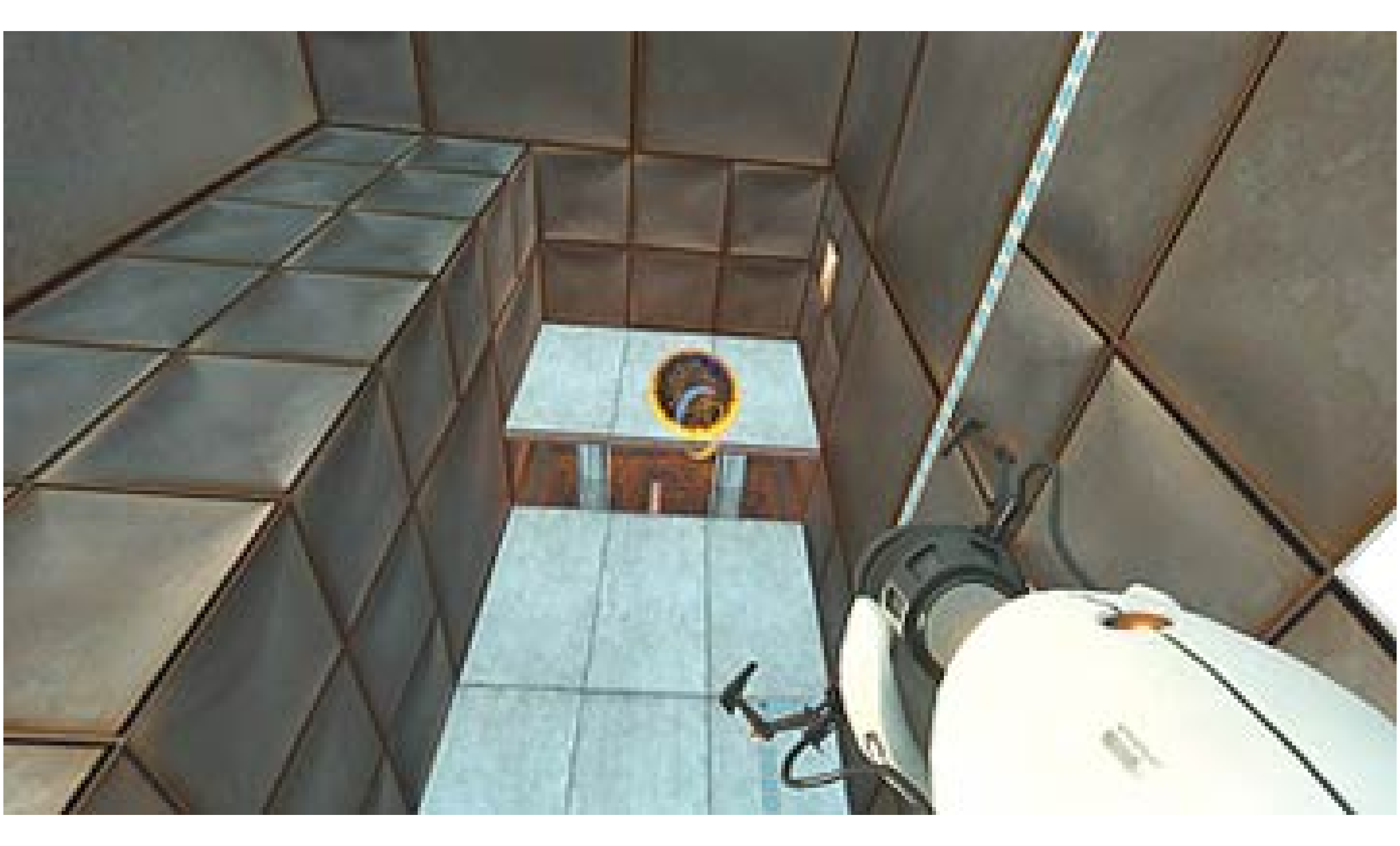
Gameplay

Portal Science

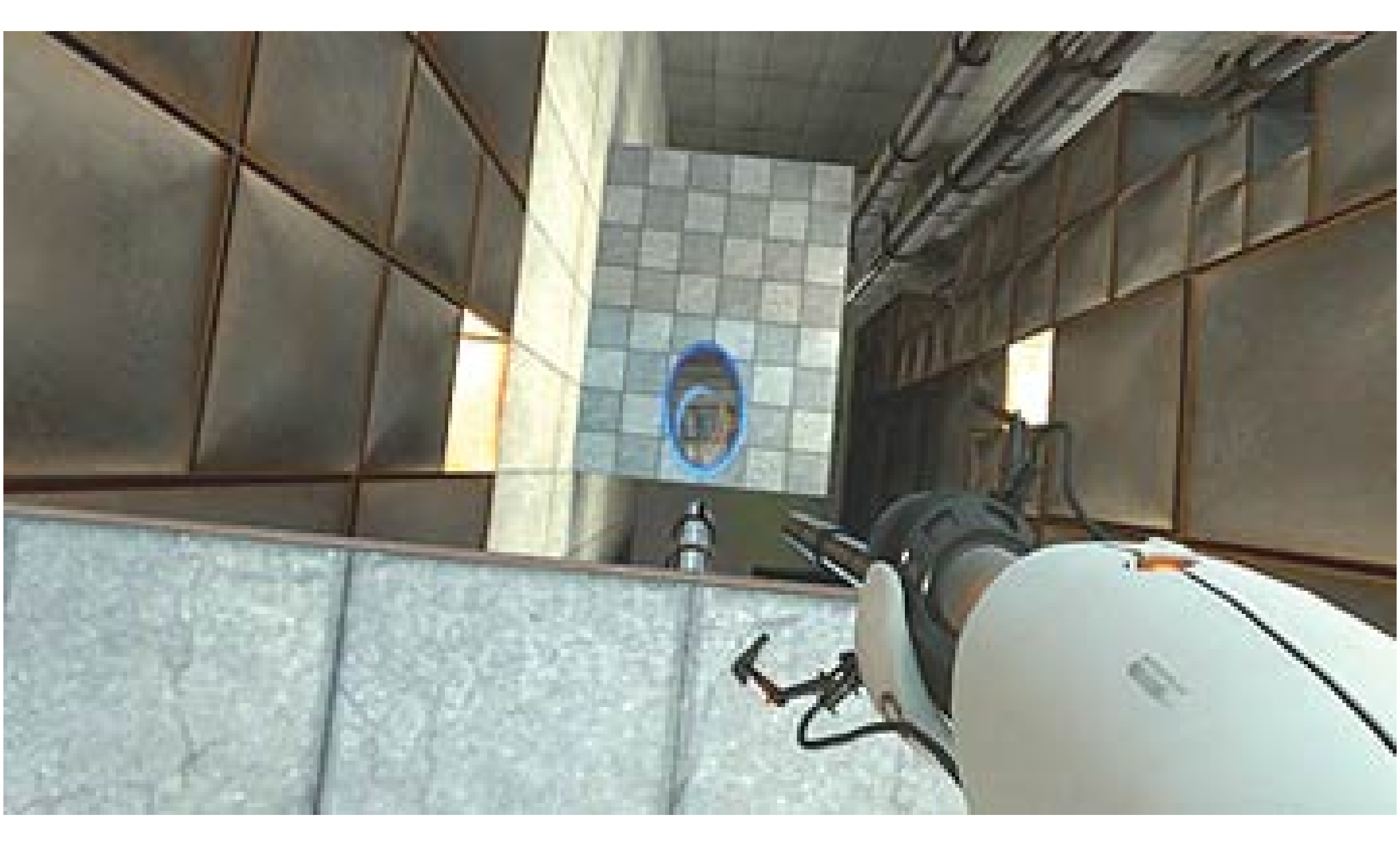
Becoming a master of the portal gun involves much more than figuring out how to get from point A to point B—it's all about getting from point to point while violating as many physical laws as possible! These advanced techniques will make your compulsory test period just a bit more manageable.

Fling

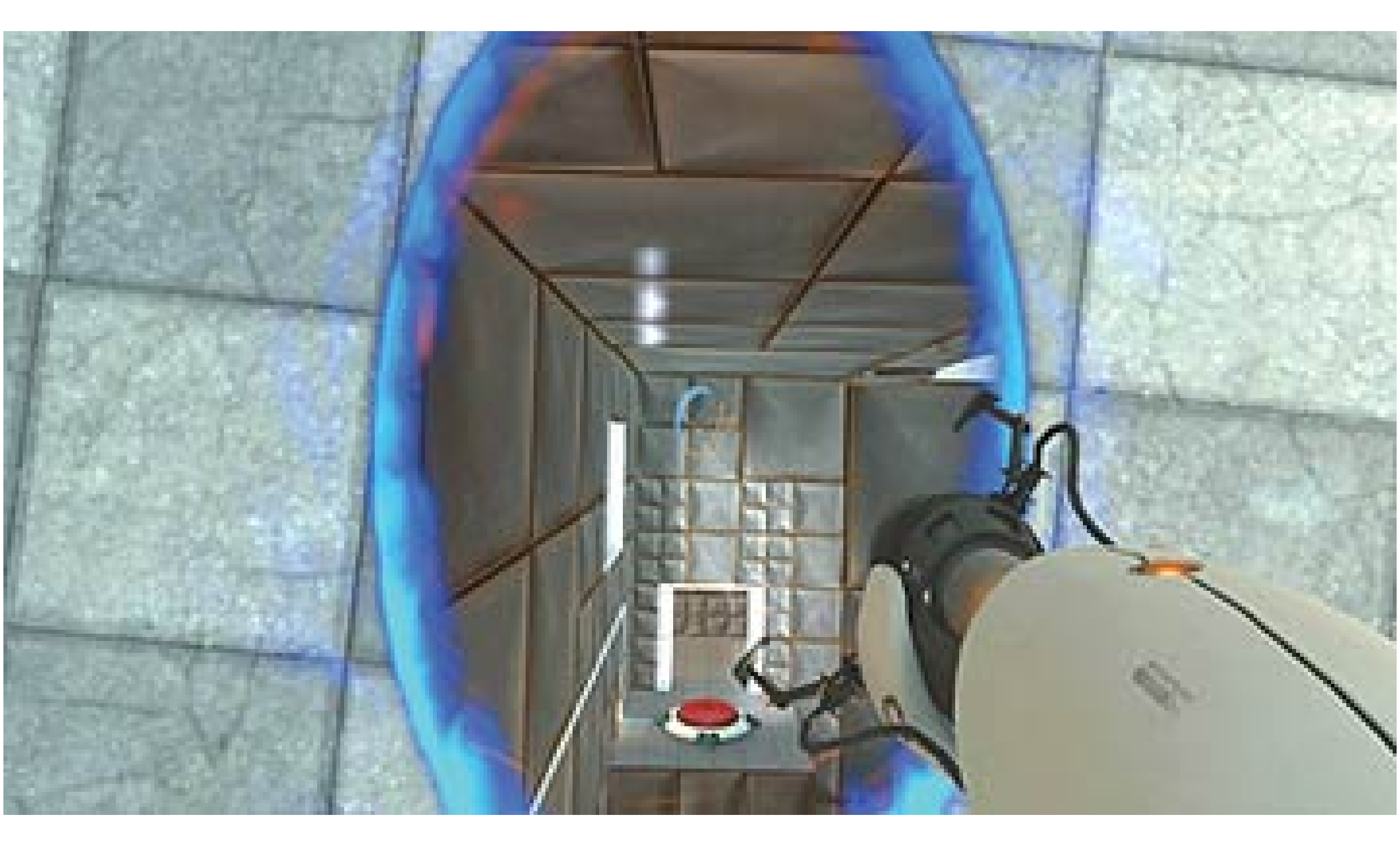




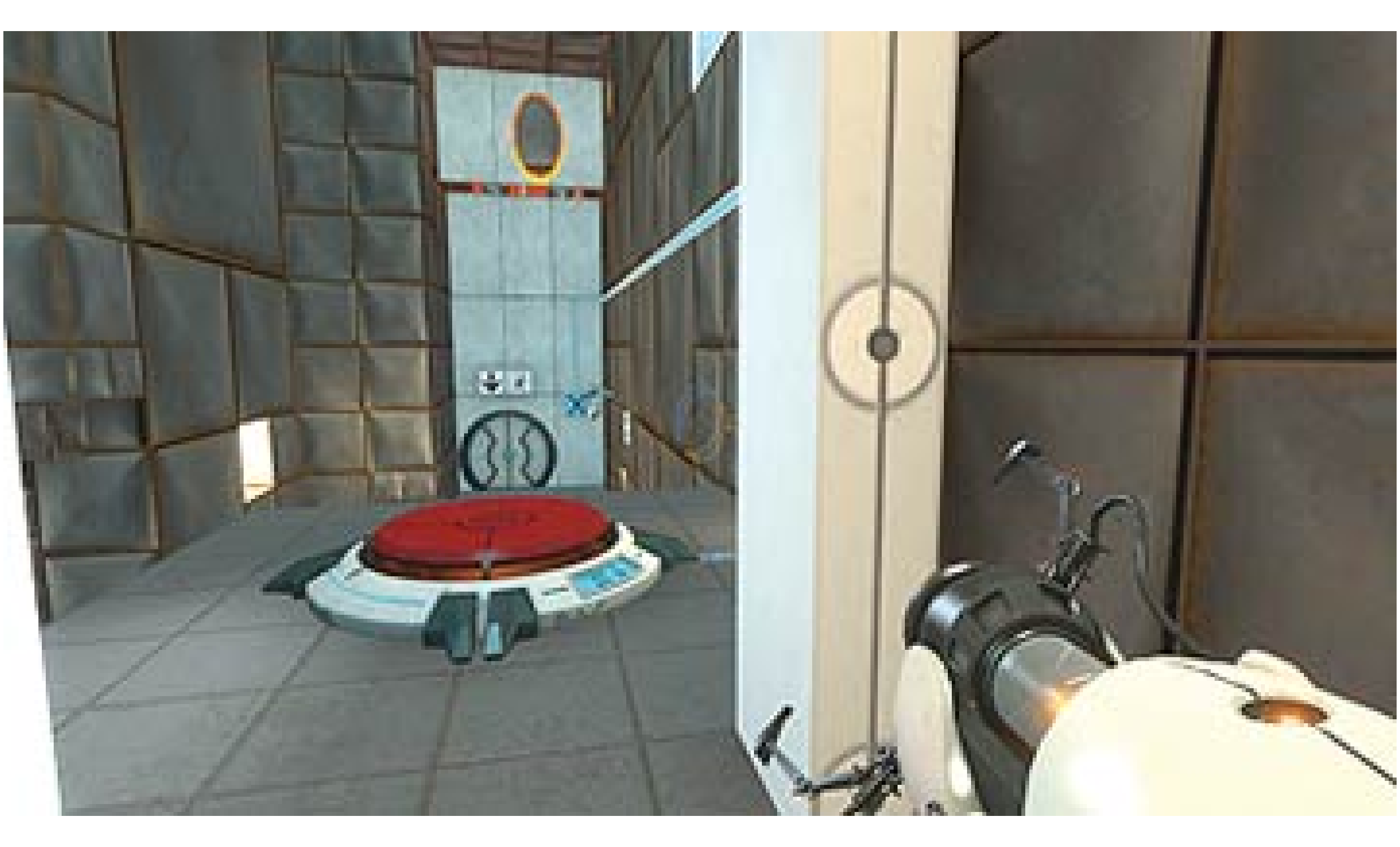
2. A 180-degree turn reveals a suitable surface right across the large chasm separating you from your destination. Place a portal here.



3. Next, find the deepest pit you can safely jump into from your position. Place your second portal here.



4. Now jump in! Notice how you continue to fly quickly after exiting the second portal, despite the change in trajectory.



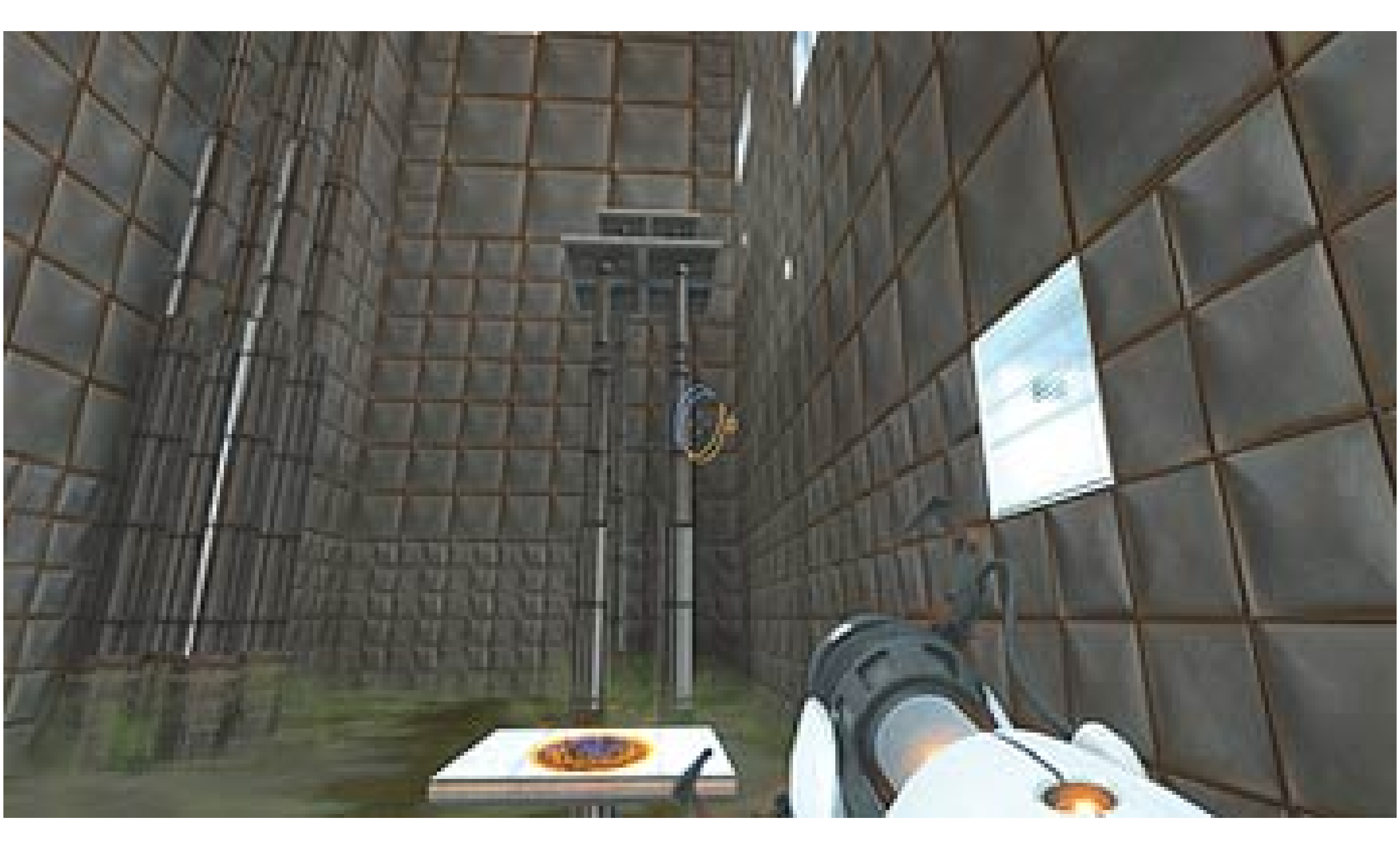
5. Success! You've cleared the chasm and arrived at the far ledge. You are now a master of flinging.

When the laws of physics refuse to cooperate, sometimes you just have to force them. "Flinging" is an advanced technique whereby you transform downward momentum into forward momentum by means of cleverly placed portals. This is mainly used to clear large gaps or obstacles when more orthodox means, such as stairs or lifts, aren't available. The concept is simple: You place portal A on a high wall across from the area that you wish to fly over. Meanwhile, portal B is placed deep in a pit. When you jump into portal B, you'll emerge from portal A with all the momentum you gained from falling into the pit intact. This should be more than enough to propel you across the gap or obstacle.

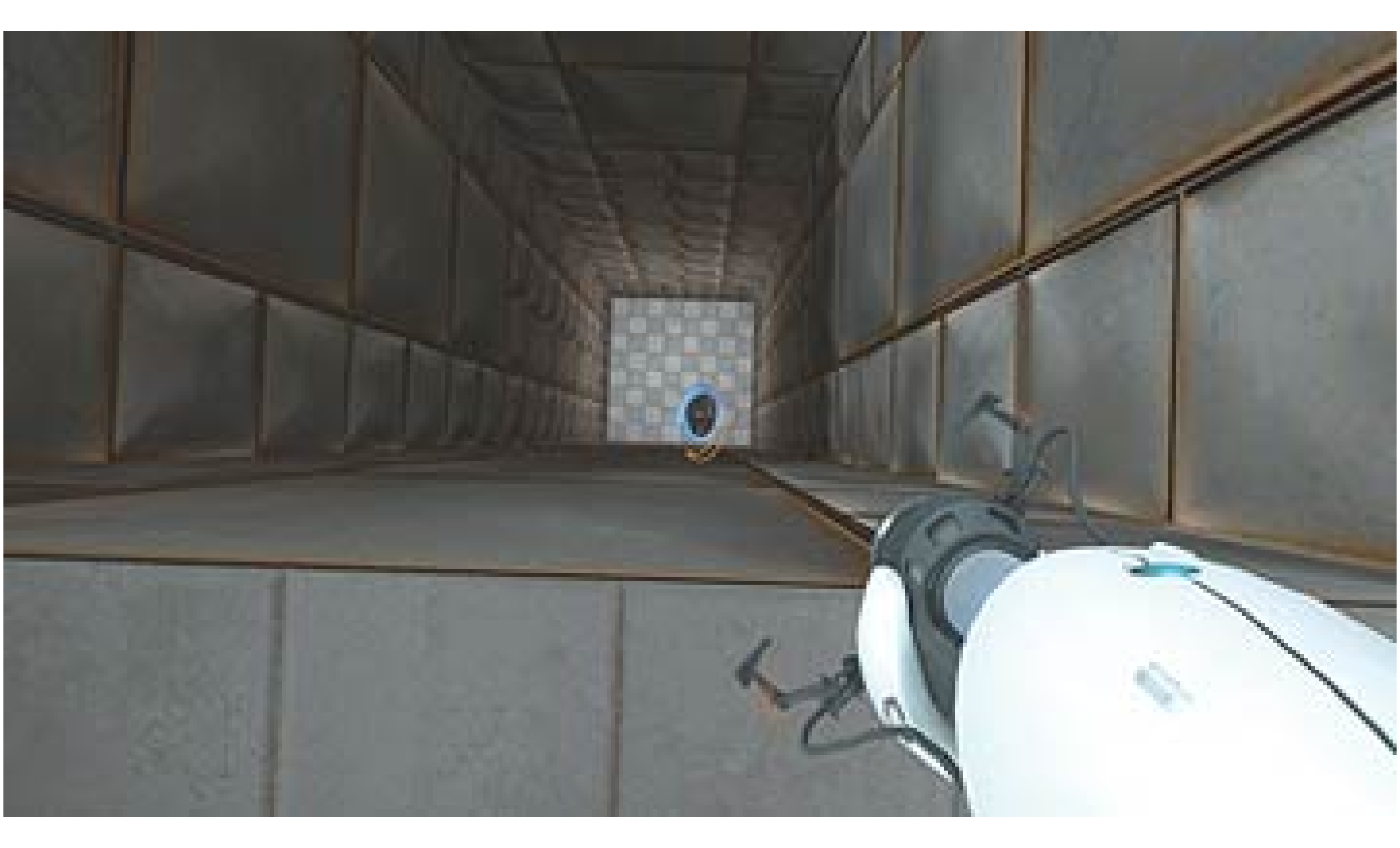
A second variant is the "Wedge Fling," which is identical to the regular Fling, except portal A is placed on an upward-slanted, elevated surface. Since your point of exit is a few degrees steeper, you'll fly much farther. As a result, Wedge Flings are highly recommended if you like flying.

DOUBLE FLING

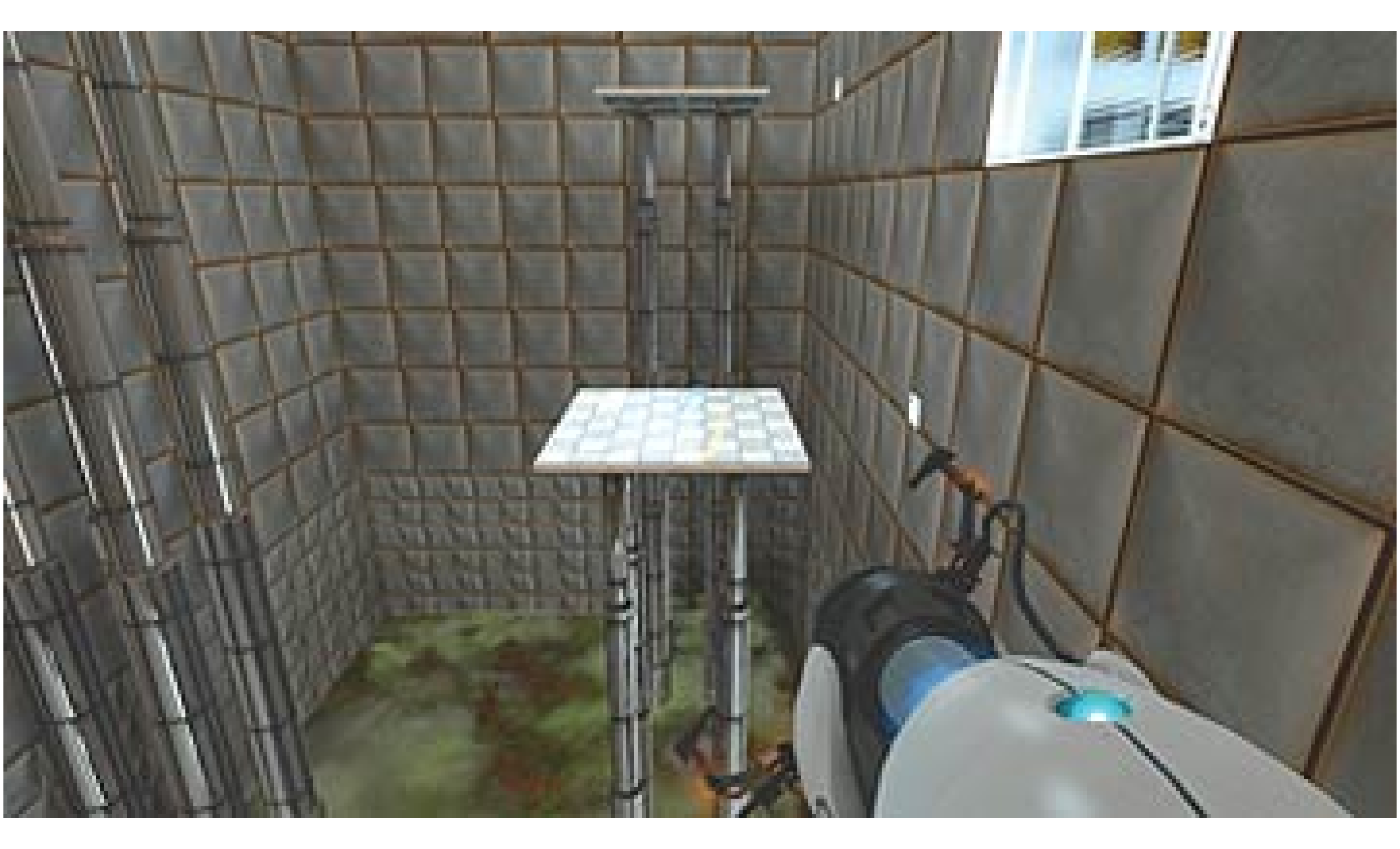
Do not despair if you lack a deep enough pit from which to fling, however—in such cases, you can employ a "Double Fling." The concept is identical, though the execution is a little bit trickier. Instead of placing portal B in a pit, just deploy it anywhere you can easily reach by walking. Entering into it will eject you from portal A, up on the high wall. As you're falling through (with all that wonderful momentum intact), guesstimate where you'll land, and place portal B on that spot. This will send you through portal A again, this time with enough to momentum to clear that pesky obstacle.



1. This is the ledge you want to reach. Problem is, you aren't high enough to place a portal on its surface. You can work around that, though—deploy a portal on the one closer to you.



2. Now, find a deep pit, place a portal in it, and jump through.

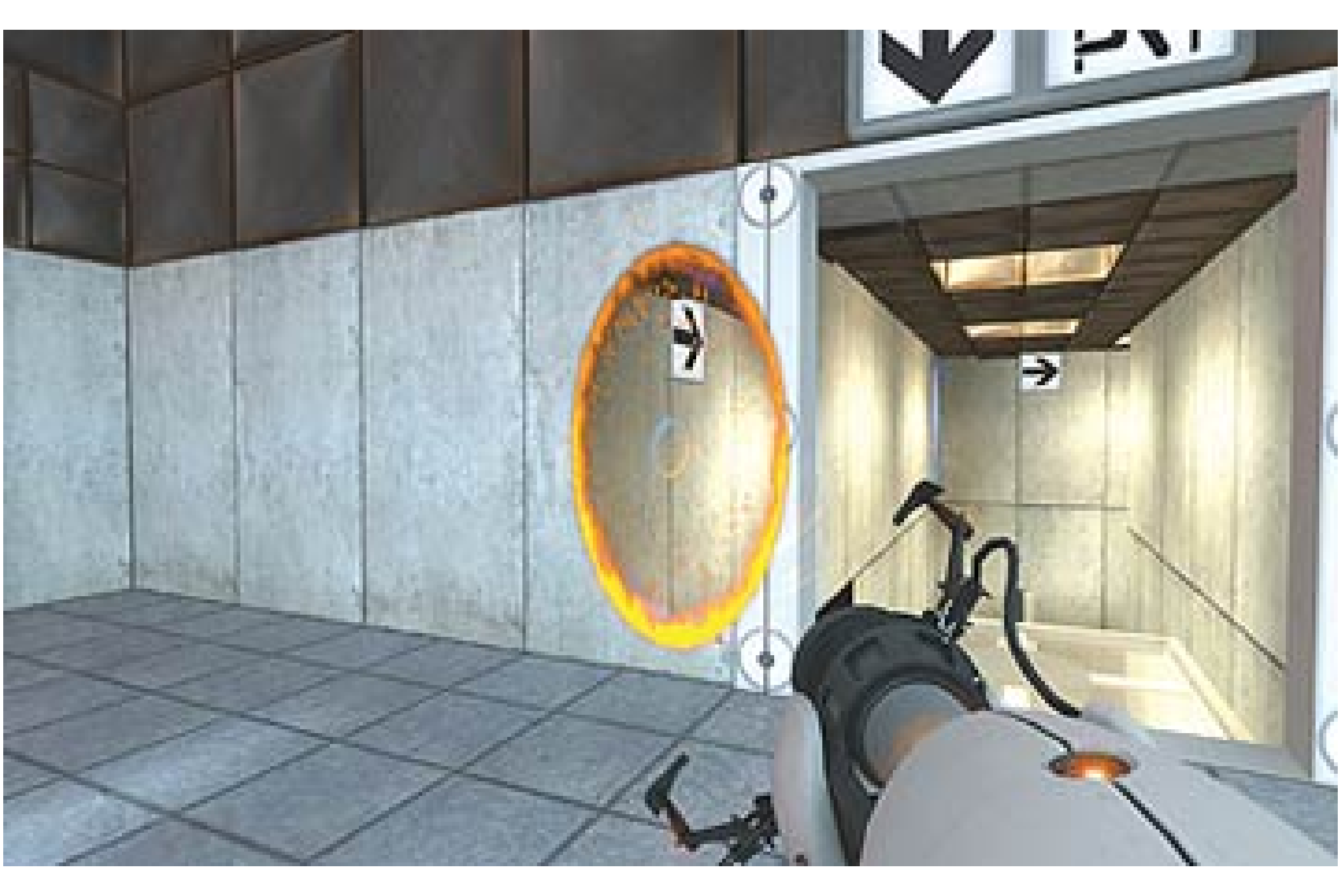


3. Wheee! Now you can reach that elevated surface with vertical momentum to spare!

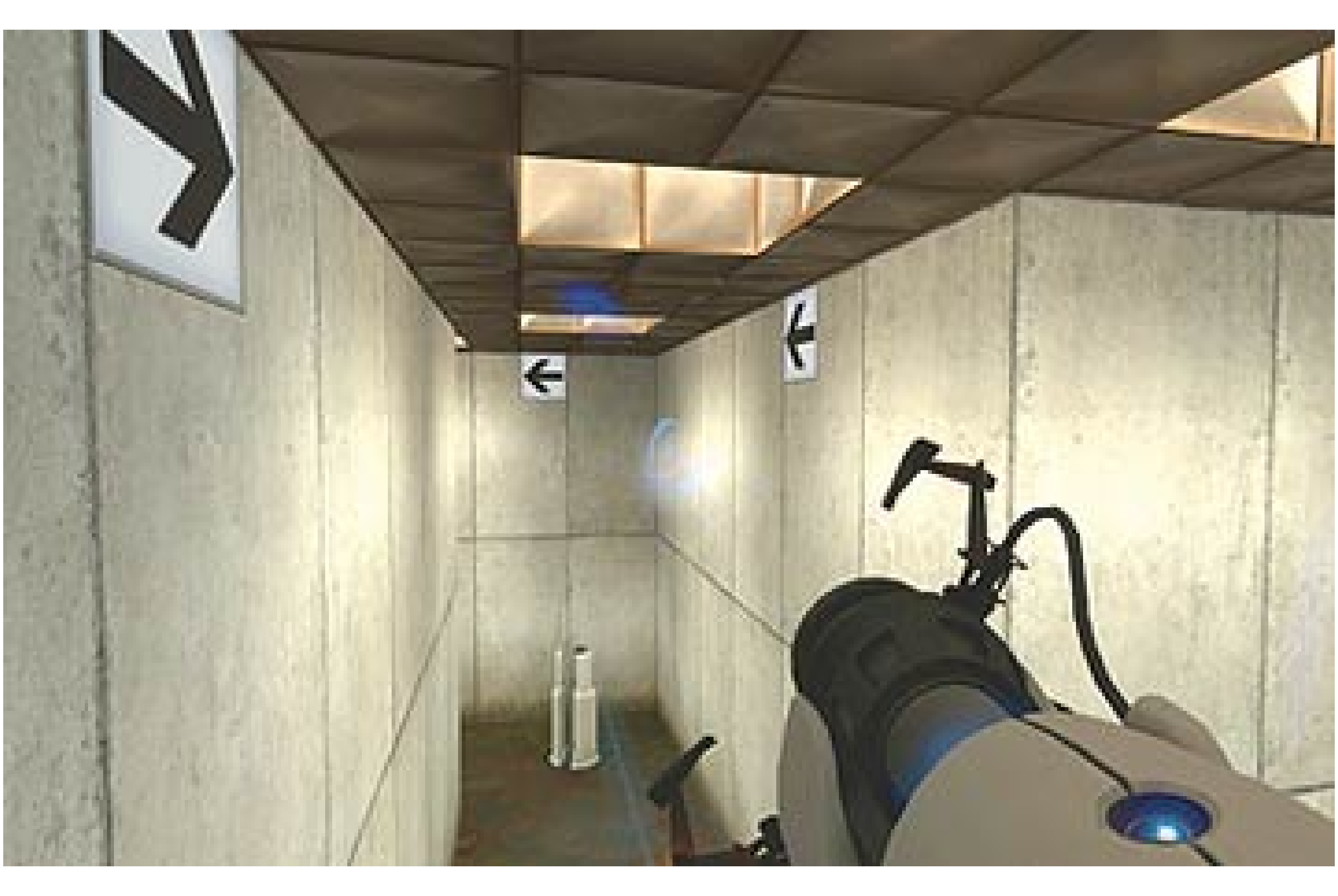
Floor-to-Floor

In the absence of a portal-friendly high wall from which to fling, there is another way to exploit momentum for the purposes of reaching remote ledges: a technique called "Floor-to-Floor." The concept is similar: Place portal A on the ground near the ledge you need to reach, and place portal B in the deepest pit as you can find. Jump into pit containing portal B, watch in wonder as your gravitational momentum is reoriented as you emerge through portal, and master the distance that had previously confounded you.

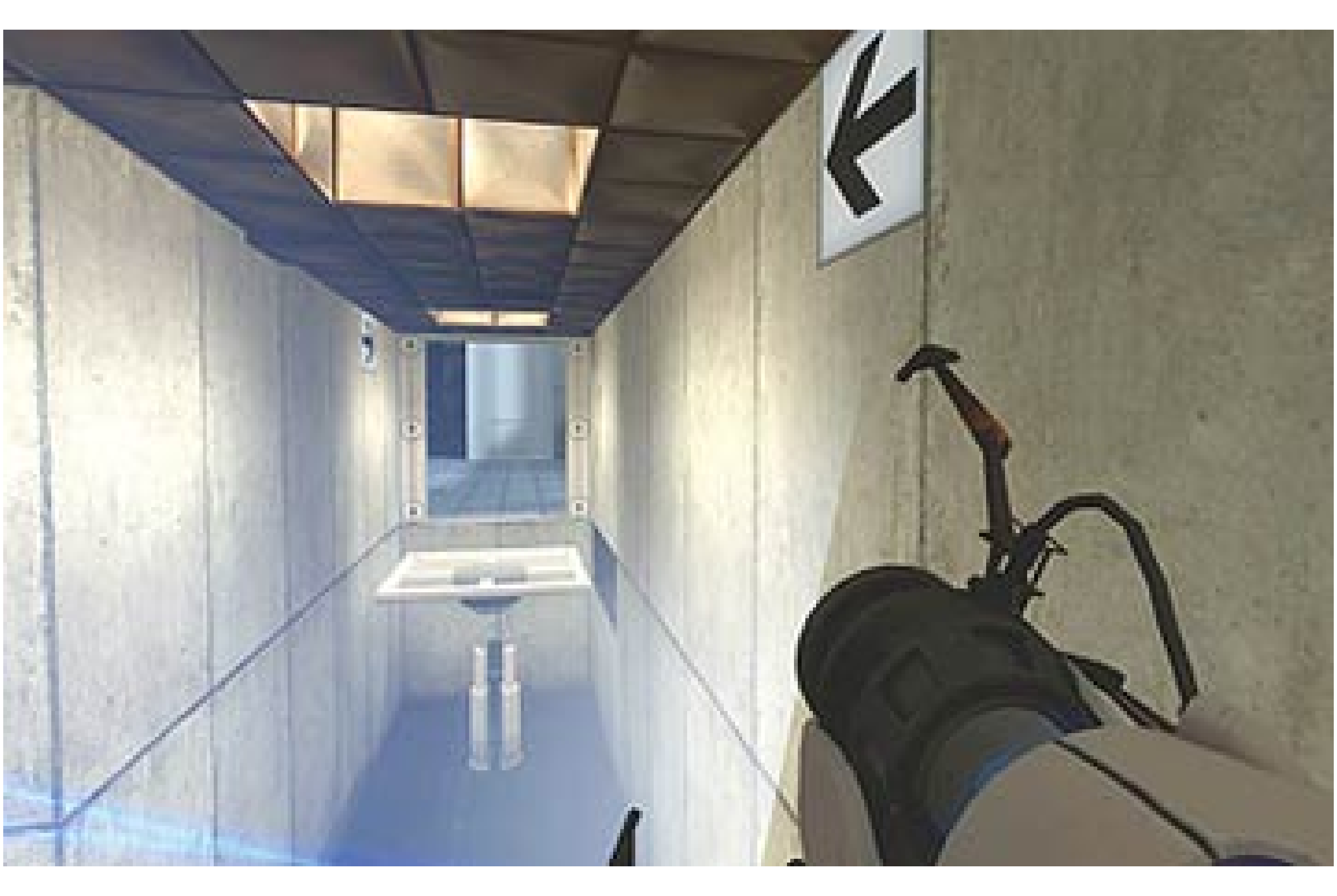
Portal Ledge



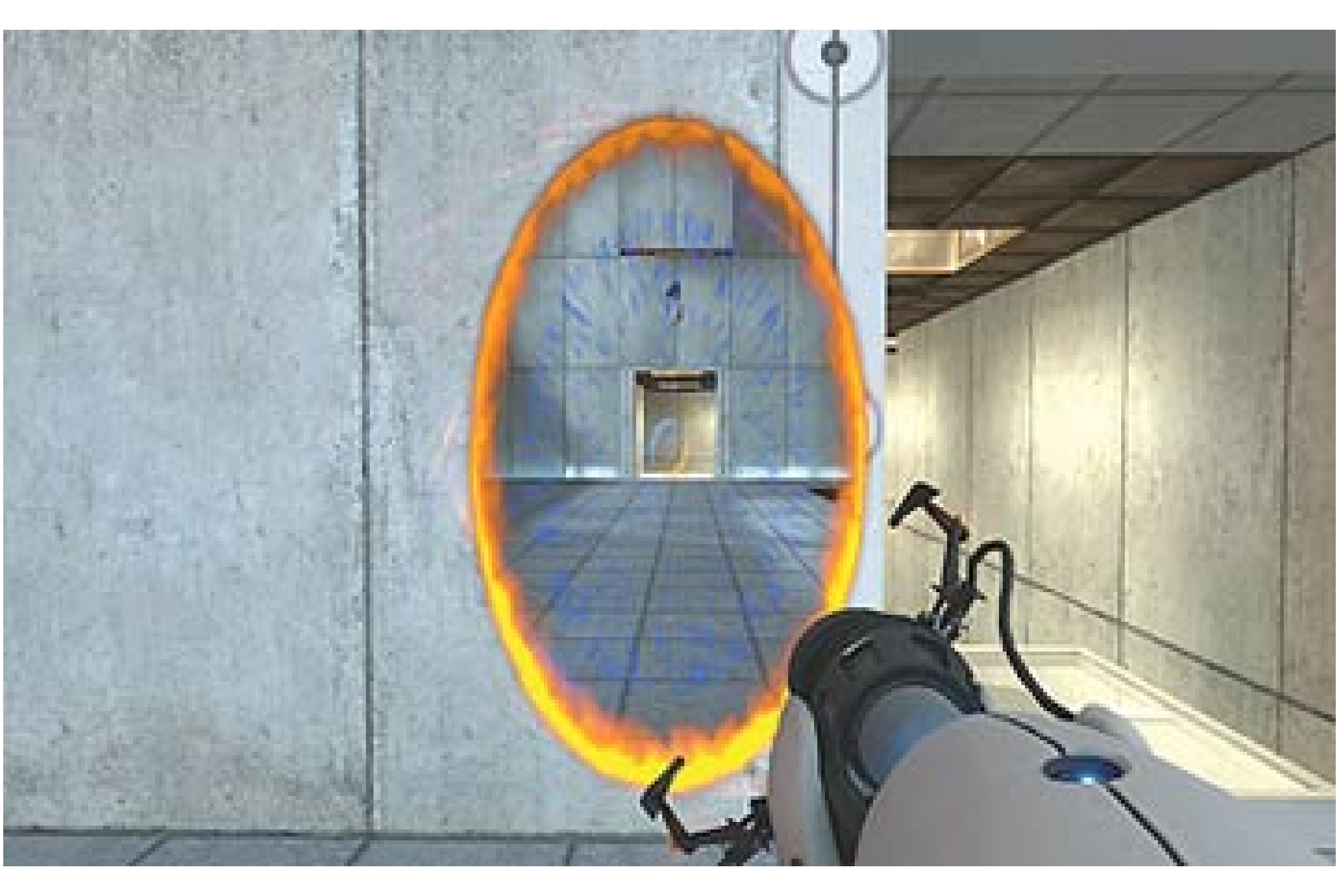
1. This first portal provides the needed vantage point to cross this zigzagging passageway.



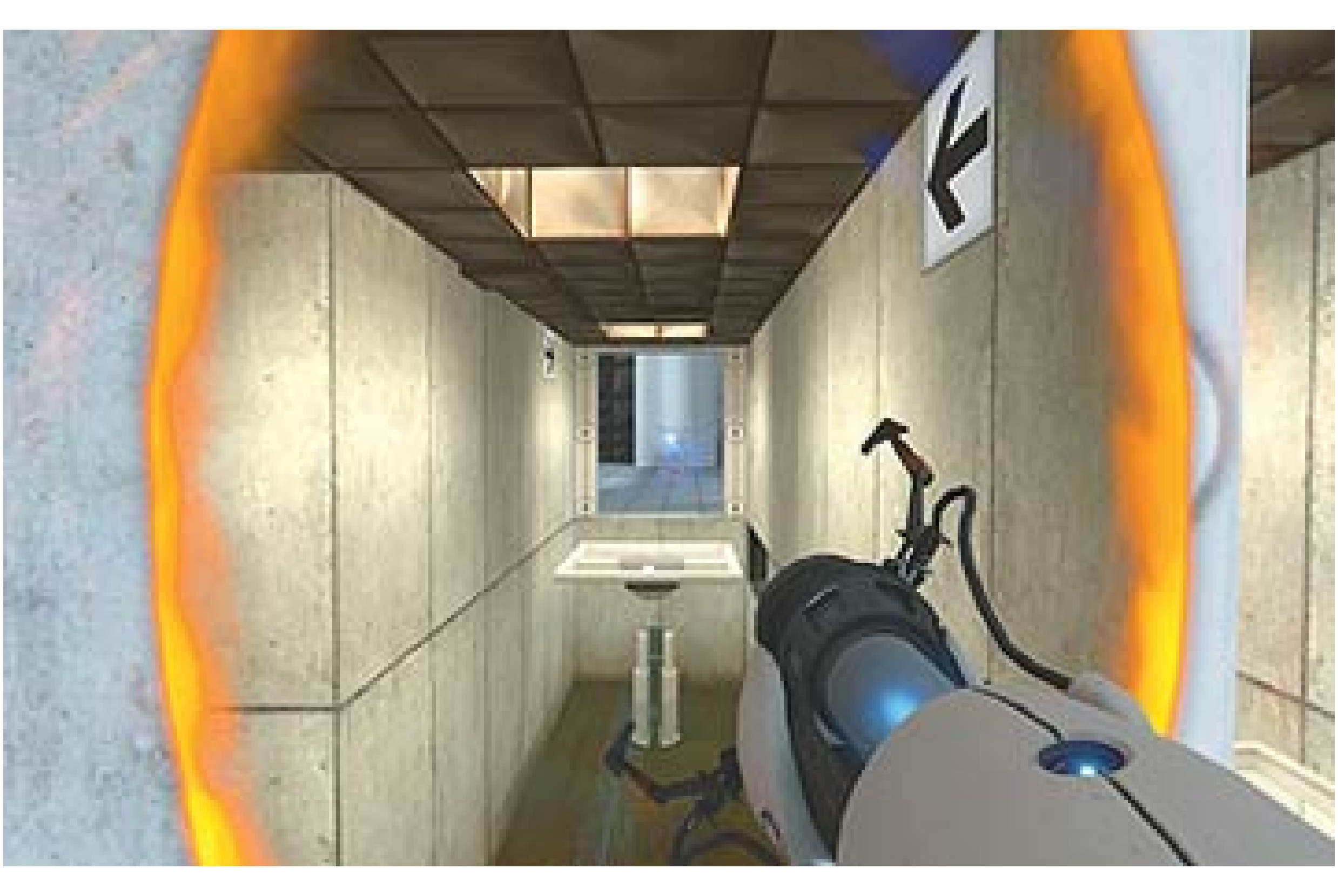
2. The second portal goes on the wall, where it can be reached easily.



3. Upon entering the second portal, you emerge where you placed the first, facing your next vantage point. Replace your first portal here.You have just arrived at the exact point where you replaced your first portal. That surface ahead is your ultimate destination.



4. Fire a portal there...



5. ...and you can back out into the distant room. That is a perfectly executed Portal Ledge.

While you're unlikely to employ this advanced technique often unless you feel like showing off, mastering the Portal Ledge is crucial if you want to tackle some of the mind-bending Challenge Mode levels. The Portal Ledge involves standing partway through a portal you've already deployed, and using it as a ledge to reach surfaces beyond the range of your actual location. You can literally use it as a ledge to jump through, or deploy another portal from inside it and edge your way toward a distant destination. The latter technique requires you to exit out of your original portal immediately after placing the second portal, to prevent you from exiting through it (quite possibly to your demise). Creatively utilized in this way, the Portal Ledge enables you to skip large parts of rooms. Why bother? Well, in some of the Challenge Mode stages, every little step you take can come between you and a gold medal. Intelligent use of the Portal Ledge will make those milestones all the more attainable.

Portal Chamber Strategy

Chamber 13

Review advanced portal locomotion techniques such as the Fling, Floor-to-Floor, Portal Ledge, Double Fling, and Wedge Fling in the Advanced Placement Portal Science section in *Not Quite Rocket Science: A Portal Overview*

Please click to enlarge

Portals

Goal: Bronze Medal

Portal Limit : 9 or less.

Strategy: Place two portals in first room, and two portals to activate the lift via the Ball Catcher. Use two more portals to get on lift. Jump to shorter platform with the red button via the exit door ledge, with Cube in tow. Use two portals to reach the taller platform and be sure to place one of them on the wall near the button. When the blast doors open, fire a portal through it and reuse the portal near the button to exit.

Goal: Silver Medal

Portal Limit : 5 or less.

Strategy: Use two portals to get the Cube to the button in the first room. Then use one portal to get it to the button on the taller platform. Jump to the low button, ignoring the Launcher and Catcher but avoiding the ball, and use two portals to get through the door.

Goal: Gold Medal

Portal Limit: 4 or less.

Strategy: Use two portals to get the Cube to the button in the first room. Use one portal on the wall near the taller platform. Take the first Cube to the taller platform and throw it to the button on the shorter platform (while remaining on the high platform). Use one portal to get through the door.

Steps

Goal: Bronze Medal

Steps Limit: 35 or less.

Strategy: Place a portal at your feet when you exit the elevator and a second portal on the catwalk. Grab the Cube through a portal and throw it onto the red button in the first room. Place a portal on the wall near the button on the taller platform. Jump through next to the cube. Portal the Cube onto the button on the taller platform. Jump to the shorter platform. Place a portal to the exit room. Jump to the elevator.

Goal: Silver Medal

Steps Limit: 25 or less.

Strategy: Place a portal at your feet when you exit the elevator, and a second portal on the catwalk. Grab the Cube through a portal and throw it onto the button. Place a portal on the wall near the button on the taller platform and another on the ground near the Cube. Fall into the floor and grab the Cube on your way. Place it on the button on the taller platform and fire a portal at your feel and another on the ceiling above the button on the shorter platform. Portal through the floor to the exit room and jump to the elevator.

Goal: Gold Medal

Steps Limit: 15 or less.

Strategy: Place a portal at your feet when you exit the elevator, and a second portal on the catwalk. Grab the Cube through a portal and throw it onto the button. Place a portal on the ceiling above blank floor in the second room and one on the ground near the Cube. Fall into the floor and grab the Cube on the way. Portal the Cube to the button on the taller of the elevated platforms. Place a portal at your feet and another on the ceiling above the button on the shorter platform. Portal Floor-to-Floor to the exit room. Keep on Floor-to-Floor bouncing and place a floor portal close to the Emancipation Grid. Hop out near the grid and run to the elevator.

Times

Goal: Bronze Medal

Time Limit: 0:40 or less.

Strategy: Place portals to get you to the first room from the elevator. Portal to the Cube and jump to the button in the first room. Portal to the button atop the taller elevated platform and take the first Cube with you. Activate the Ball Catcher quickly, get the second Cube, and portal it to the button on the shorter platform. Portal to exit.

Goal: Silver Medal

Time Limit: 0:30 or less.

Strategy: Skip the first Cube entirely and portal directly to the button. Then portal through door into the second room. Activate the Ball Catcher quickly, grab the second Cube and portal it to either the tall or short button-platform. Stand on the platform you didn't choose and portal through the door to the exit.

Goal: Gold Medal

Time Limit: 0:19 or less.

Strategy: Portal to first room from the elevator. Next, portal to the Cube and use it to activate the button in the first room. Portal to either of the button-platforms and take the first Cube with you. Ignore the Ball Catcher and jump to other button-platform while and avoiding the energy ball. Portal through door to the exit.

Portal Chamber Strategy

Chamber 14

Review advanced portal locomotion techniques such as the Fling, Floor-to-Floor, Portal Ledge, Double Fling, and Wedge Fling in the Advanced Placement Portal Science section in *Not Quite Rocket Science: A Portal Overview*

Please click to enlarge

Portals

Goal: Bronze Medal

Portal Limit: 6 or less.

Strategy: Use two portals to fling to the Cube: one next to the observation glass, and one in the pit. Use two more to get across the goo-filled hallway. Use one portal in the Launcher room to teleport the ball and follow it out, making sure to leave the portal you placed at the opposite end of the hallway active. The last portal goes above the Catcher in the Cube's original room.

Goal: Silver Medal

Portal Limit : 4 or less.

Strategy: Use two portals to fling to the Cube, but don't use any to traverse the goo-filled hallway—hop across both ways instead. Use two more portals to activate the Ball Catcher.

Goal: Gold Medal

Portal Limit: 2 or less.

Strategy: Ignore all the puzzles in the chamber completely, and instead utilize the Floor-to-Floor technique (see Advanced Placement Portal Science in the Portal "Overview" Section) to hop onto the victory lift from the entrance passage. Place a portal on the ground near the lift, another deep into the stair pit. This should provide enough momentum to reach the exit grid.

Steps

Goal: Bronze Medal

Steps Limit: 55 or less.

Strategy: Portal yourself near the exit lift taking as few steps as possible. Place a portal near the exit lift and a second one above the Ball Catcher. Walk through. Fling to the Cube's ledge, seize the Cube, and return to your portal near the Catcher. Use portals to return to the button, and place the Cube. Portal through the blast doors, and again across the goo-filled hallway. Now place a portal where the ball meets the wall, and travel through it back across the hallway. Place a portal above the Catcher. Finally, portal yourself onto the activated lift.

Goal: Silver Medal

Steps Limit: 20 or less.

Strategy: Portal yourself near the exit lift taking as few steps as possible. Place a portal on the floor near the exit lift, and another above the Ball Catcher beyond the pit. This should give you enough momentum to Floor-to-Floor onto the lift without solving any puzzles.

Goal: Gold Medal

Steps Limit: 10 or less.

Strategy: Portal yourself near the exit lift taking as few steps as possible. Place a portal on the floor near the exit lift, and another on the ceiling above the stair pit. Fall into the floor portal and place another portal on the floor of the pit as you fall through the ceiling. This provides you with enough momentum to Floor-to-Floor onto the exit lift without solving any puzzles.

Time

Goal: Bronze Medal

Time Limit: 0:50 or less.

Strategy: Place portals to get you near the exit lift. Then portal yourself to the top of the stairs. Next, fling onto the ledge where the Cube is, and travel back to the button via portals. Portal through the blast doors and across the goo-filled hallway. Place a portal where the ball meets the wall and follow it out to the entrance of the goo-filled hallway. Place your last portal above the Ball Catcher, and wait for the victory lift.

Goal: Silver Medal

Time Limit: 0:20 or less.

Strategy: Portal to the victory lift, then to the top of stairs, making sure to leave a portal on the ground near the lift. Place a portal deep in the pit and jump through. Utilize downward momentum to Floor-to-Floor onto the lift.

Goal: Gold Medal

Time Limit: 0:10 or less.

Strategy: Portal yourself near the exit lift. Place a portal on the floor near the exit lift, and another on the ceiling above the stair pit. Fall into the floor portal, and place another portal on the floor of the pit as you fall through the ceiling. This provides you with enough momentum to Floor-to-Floor onto the exit lift without solving any puzzles.

Portal Chamber Strategy

Chamber 15

Review advanced portal locomotion techniques such as the Fling, Floor-to-Floor, Portal Ledge, Double Fling, and Wedge Fling in the Advanced Placement Portal Science section in *Not Quite Rocket Science: A Portal Overview*

Portals

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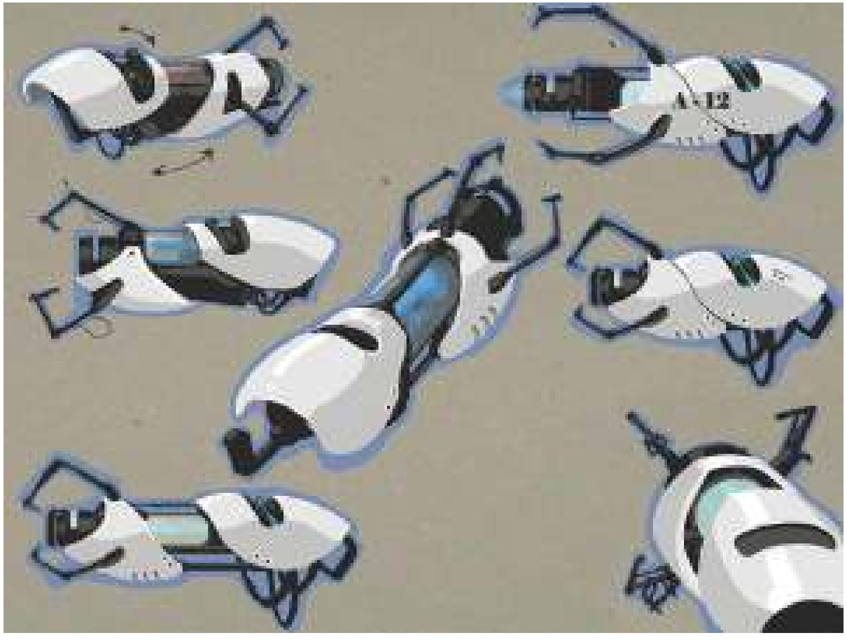


Goal: Bronze Medal

Portal Limit: 23 or less.

Strategy: Use two portals to double-fling over the first Material Emancipation Grid. In the next room, use the bare minimum four portals to solve the first Catcher puzzle. You need three portals to get over the second grid when you go up the lift, and two more to get over the third grid. Solve the second Catcher puzzle with two portals, and use two more to get back over the grid. Use four portals to get into the final room, and four more solve final Catcher puzzle.

Goal: Silver Medal

Portal Limit: 21 or less.

Strategy: For a Silver Medal, follow the strategy provided for Bronze until you get to the last room. Here, instead of wasting portals to solve the Catcher puzzle, simply Floor-to-Floor to the exit lift.

Goal: Gold Medal

Portal Limit: 14 or less.

Strategy: For the Gold Medal, follow the Bronze Medal strategy until you reach the zigzagging passage with the poisonous goo. Instead of blowing six portals to traveling to and from the third grid to solve the Catcher puzzle, simply use the Portal Ledge technique until you can reach the second room. Use four portals to do this, and make sure that the last one you place goes on the ground beneath the exit lift. Use your last one to Floor-to-Floor onto the exit.

Steps

Goal: Bronze Medal

Steps Limit: 75 or less.

Strategy: You can easily achieve a Bronze Medal by using copious amounts of portals instead of walking, given all the portal-friendly surfaces in Test Chamber 15.

Goal: Silver Medal

Steps Limit: 65 or less.

Strategy: To shave off the ten steps required for a Silver Medal, double-fling at every opportunity. Otherwise, use portals in place of your feet.

Goal: Gold Medal

Steps Limit: 55 or less.

Strategy: The remaining ten steps can be eliminated by intrepid Double Flingers, and Floor-to-Floor travelers. Only walk when you have to, and when in doubt, use portals.

Time

Goal: Bronze Medal

Time Limit: 1:45 or less.

Strategy: Treat the first room as you normally would, albeit quickly. Same with the second room, but know that if the ball bounces more than once on the Catcher side, you're in trouble. To shave off some time, don't bother with the lift—teleport past it after it's activated. Proceed as normal throughout the rest of the chamber, but be quick!

Goal: Silver Medal

Time Limit: 1:25 or less.

Strategy: Treat the first room as you did for the Bronze Medal, but you have to do the Catcher puzzle in the second room perfectly—not a single bounce on the Catcher side is acceptable. Teleport past the lift. Proceed as normal throughout the rest of the chamber, but in the last room, don't bother solving the puzzle; instead, Floor-to-Floor onto the exit lift.

Goal: Gold Medal

Time Limit: 0:54 or less.

Strategy: Proceed as you did for the Silver Medal until you teleport past the lift after the second room. In the next room, teleport through the floor near the glass wall to the alcove, then double-fling across the grid. Use the Portal Ledge technique to get through the zigzagging hallway, making sure to leave your last portal on the ground near the exit lift. Floor-to-Floor onto the exit when you're in the room.

Portal Chamber Strategy

Chamber 16

Review advanced portal locomotion techniques such as the Fling, Floor-to-Floor, Portal Ledge, Double Fling, and Wedge Fling in the Advanced Placement Portal Science section in *Not Quite Rocket Science: A Portal Overview*

Portals

Please click to enlarge

Goal: Bronze Medal

Portal Limit : 9 or less.

Strategy: Use two portals to get past the second turret, then simply pass the turret on the stairs. Use two portals to destroy first turret in the hall, and one to destroy the second. Reuse your last portal and teleport behind the pair of turrets in the next room. Use one portal to destroy the farthest turret in the last room. Then pick up the turret nearest to you and smash the one on the far right. Place a portal on the floor to teleport past the first mesh wall, and one more to teleport past the final one.

Goal: Silver Medal

Portal Limit: 4 or less.

Strategy: Pick up the first turret, and use it to smash the second and third ones. Physically smash both hall turrets with a Cube. Smash the turret pair in the large room with a Cube as well. Use two portals to destroy farthest turret in the smaller room to your left. Then pick up the nearest turret and smash the far-right turret. Use one portal on the floor to teleport past the first mesh wall, and one more to teleport past final one.

Goal: Gold Medal

Portal Limit : 2 or less.

Strategy: You have to save both portals to exit the Test Chamber past the final mesh wall, so build lots of Cube forts, and physically destroy all the turrets in your path.

Steps

Goal: Bronze Medal

Steps Limit: 70 or less.

Strategy: You can easily take 70 or fewer steps if you use lots of portals instead of walking.

Goal: Silver Medal

Steps Limit: 55 or less.

Strategy: Again, make heavy use of portals instead of running, but be sure to smash the turret pair in the larger room before the button with Cubes. Portal directly from the button to the final room.

Goal: Gold Medal

Steps Limit: 40 or less.

Strategy: Continue your habit of portal-locomotion, but when you reach the area with Cubes blocking the prison, get on top of the horizontal piston using a ceiling portal. This allows you to stand with a portal around your waist and teleport around the Test Chamber without walking. Place your portals quickly to avoid being shot.

Time

Goal: Bronze Medal

Time Limit: 1:10 or less.

Strategy: Portal past the first two hallways. Destroy the crossfire turrets with Cubes. Portal past the turret pair behind the glass wall. Drop the first turret in the room to your left on the one nearest it, then teleport behind the third turret. You can safely portal past the last two to the exit.

Goal: Silver Medal

Time Limit: 1:00 or less.

Strategy: Portal past the first two hallways. Drop a Cube on the first crossfire turret and use the other Cube to shield you through the next three. Drop the nearest turret in the button room onto the one closest to it, and jump behind the last one in the alcove. Portal past the last two turrets behind the blast doors.

Goal: Gold Medal

Time Limit: 0:52 or less.

Strategy: Portal past the first hallway. Same through the second, but make sure the first crossfire turret doesn't spot you. Run through the crossfire hallway and round the corner while hugging the glass wall. Pick up the first turret in the large room and smash the other with it. Pick up the nearest turret in the button room and use it to smash the one closest to it. Place one of the disabled turrets on the button and crouch behind it for cover from the alcove turret's fire. Portal past the last two turrets behind the blast door.

Portal Chamber Strategy

Chamber 17

Portals

Please click to enlarge

Goal: Bronze Medal

Portal Limit: 4 or less.

Strategy: Don’t squander any portals getting down the twin hallways; use the Cube to deflect the energy balls instead. Place one portal in front of the second Ball Launcher and one more to the solve door puzzle in the button room. Walk back through these portals. Use two more to solve the wedge puzzle. Proceed as normal from here, using no additional portals.

Goal: Silver Medal

Portal Limit: 3 or less.

Strategy: Place one portal in front of the first Ball Launcher. Use the Cube to get through the twin hallways. Use one portal to solve the door puzzle, and one more to solve the wedge puzzle. Solve the puzzle in the close-quarters Catcher/Launcher room, and exit the chamber using no additional portals.

Goal: Gold Medal

Portal Limit: 2 or less.

Strategy: Place one portal in front of the first Ball Launcher. Use the Cube to get through the twin hallways. Use one portal to solve the door puzzle in the button room, and use this same portal to solve the wedge puzzle by deflecting the ball with the Cube. Solve the puzzle in the close-quarters Catcher/Launcher room, and exit the chamber using no additional portals.

Steps

Goal: Bronze Medal

Steps Limit: 215 or less.

Strategy: Hop through the twin hallways to preserve steps. Leave one portal in front of the second Ball Launcher. Solve the wedge puzzle as normal. Hop back and place a portal in front of the first Launcher. Hop to the door puzzle in the button room and solve it. Hop to in the close-quarters Catcher/Launcher room and solve it. Hop to the exit.

Goal: Silver Medal

Steps Limit: 175 or less.

Strategy: Leave one portal in front of the first Launcher. Hop through the twin hallways to preserve steps. Solve the wedge puzzle as normal. Hop to the door puzzle in the button room and solve it. Hop into the close-quarters Catcher/Launcher room and solve it. Hop to the exit.

Goal: Gold Medal

Steps Limit: 150 or less.

Strategy: Leave one portal in front of the first Launcher. Hop through the twin hallways to preserve steps. Solve the wedge puzzle as normal. Hop to the button in the Cube puzzle and deflect the ball into the Catcher with the Cube. Hop to the in the close-quarters Catcher/Launcher room and solve it. Hop to the exit.

Time

Goal: Bronze Medal

Time Limit: 2:20 or less.

Strategy: Carry the Cube through the twin hallways to the close-quarters Catcher/Launcher room and solve the bounce puzzle. Solve the puzzle in the red button room with the ball from the second hallway. Complete the wedge puzzle with the ball from the first hallway. Carry the Cube to the incinerator and exit the Test Chamber.

Goal: Silver Medal

Time Limit: 1:45 or less.

Strategy: Carry on as you did for the Bronze Medal, but stop where the first energy ball hits the wall and place a portal there. Carry the Cube to the bounce puzzle and solve it. Solve the wedge puzzle as normal. Complete the button room puzzle as normal. Carry the Cube to the incinerator and exit the Test Chamber.

Goal: Gold Medal

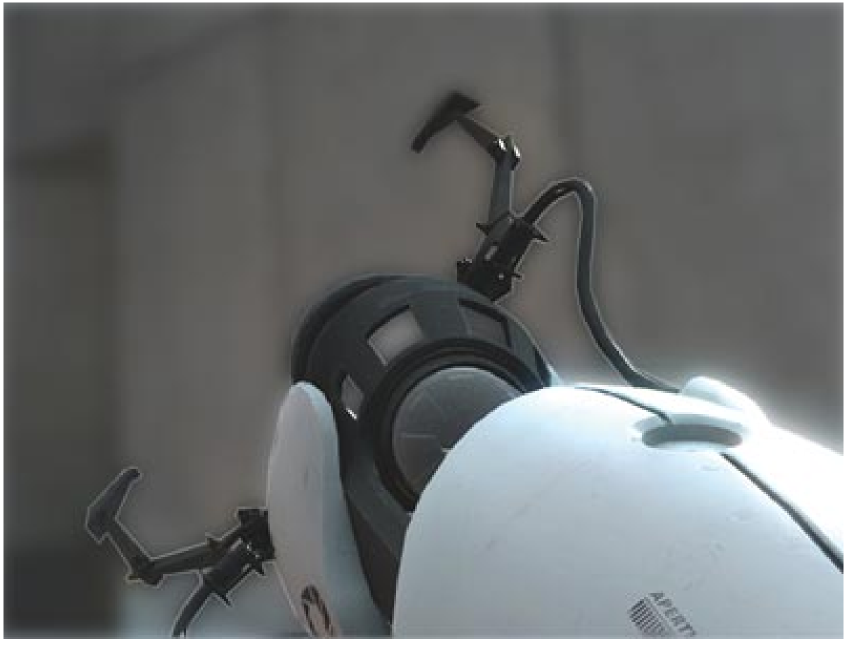
Time Limit: 1:27 or less.

Strategy: Carry on as you did for the Silver Medal, but when you complete the bounce puzzle in the close-quarters Launcher/Catcher room, set a portal for the door puzzle in the button room. Wait for the ball inside the room and trap it between both doors. Use the Cube to open the second door and activate the second lift. Set a portal for the wedge puzzle and carry the Cube to the final lift. Wait till it activates. Ride the lift halfway up, then jump to the ledge to shave off a few seconds. Carry the box to the incinerator and exit the Test Chamber.

Chamber 18

Portals

Please click to enlarge



Goal: Bronze Medal

Portal Limit : 30 or less.

Strategy: Use two portals to get across the first chasm, two more to get up to the next ledge, and two more again to reach the one after that. Use two portals (one of which has to be on the floor of the nearby lower platform) to fling to the button. Use four portals to solve the Ball Catcher puzzle, and five portals to neutralize the turrets. Use three portals to fling to the Cube, and two more portals to get back behind the protruding wedge. Use two more portals to get to the open door, and six portals to Floor-to-Floor to the exit.

Goal: Silver Medal

Portal Limit : 25 or less.

Strategy: Use two portals to double-fling across the first gap. While in the air, place one portal on the floor on the next ledge, as in advanced mode. Use one portal to get up to the next ledge, and one portal to reach the one after that (since you already have one on the floor). Use two portals (one of which must be on the floor of the nearby lower platform) to fling to the button. Use four portals to knock over three of the turrets, and three portals to solve the Ball Catcher puzzle. Use three more portals to fling to the Cube, and two to get back behind the wedge. Jump to the open door, and use six portals to Floor-to-Floor to the exit.

Goal: Gold Medal

Portal Limit: 16 or less.

Strategy: Use two portals to double-fling across the first gap. While in the air, place one portal on the floor on the next ledge, as in advanced mode. Use one portal to get up to the next ledge, and one more directly above the one already on the floor. Drop through and in midair place one portal on the floor of the next ledge and Floor-to-Floor onto the button platform. After entering the large chamber, place one portal on the wedge and one portal on the lower platform to fling to the Cube. Use two portals to get back behind the wedge. Jump to the open door, and use six portals to fling to the exit.

Steps

Goal: Bronze Medal

Steps Limit: 150 or less.

Strategy: You should be able to achieve the Bronze Medal simply by playing through normally and being frugal about your steps.

Goal: Silver Medal

Steps Limit: 120 or less.

Strategy: You should be able to achieve the Bronze Medal simply by playing through normally and being frugal about your steps. Be efficient about portal usage by ensuring that you place them near ledges you'll need to drop from whenever possible.

Goal: Gold Medal

Steps Limit: 85 or less.

Strategy: To save yourself the last dozen or so steps, you'll have to wedge-fling into the room containing the Cube when you first enter the large chamber with the turrets and rotating Ball Launcher. Yes, this means you can't activate the Catcher, or kill the turrets.

Time

Goal: Bronze Medal

Time Limit: 2:10 or less.

Strategy: You should be able to finish the challenge in under the allotted time without any special considerations.

Goal: Silver Medal

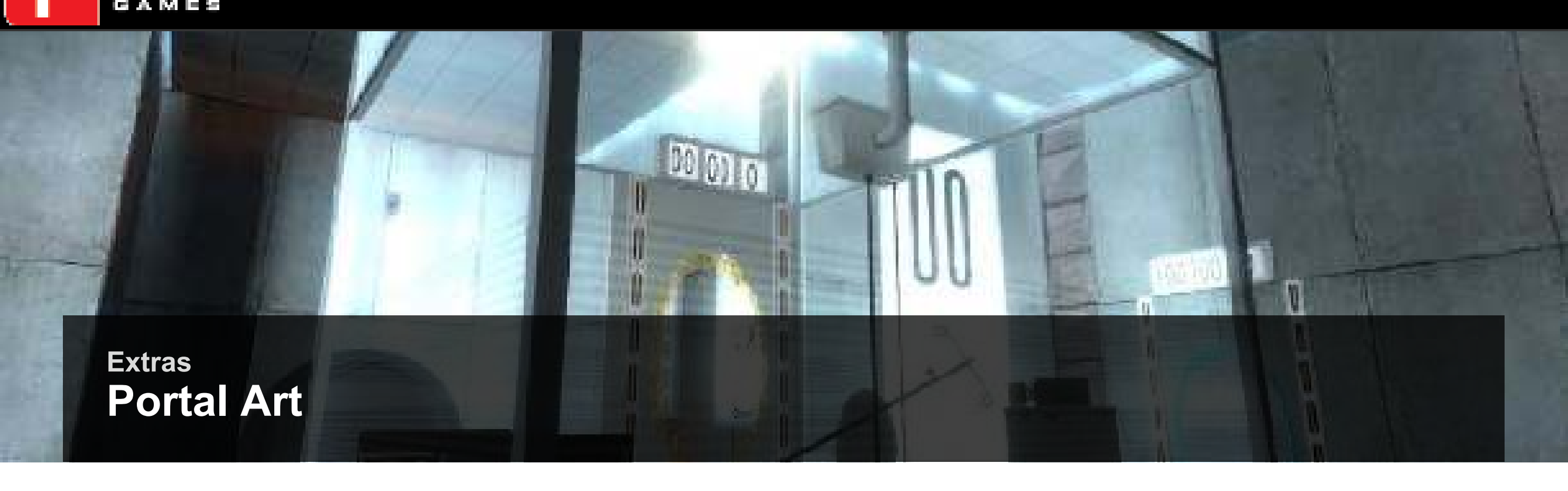
Time Limit: 2:00 or less.

Strategy: To shave off some extra time for the Silver Medal, don't bother killing all the turrets in the chamber with the elevated platforms.

Goal: Gold Medal

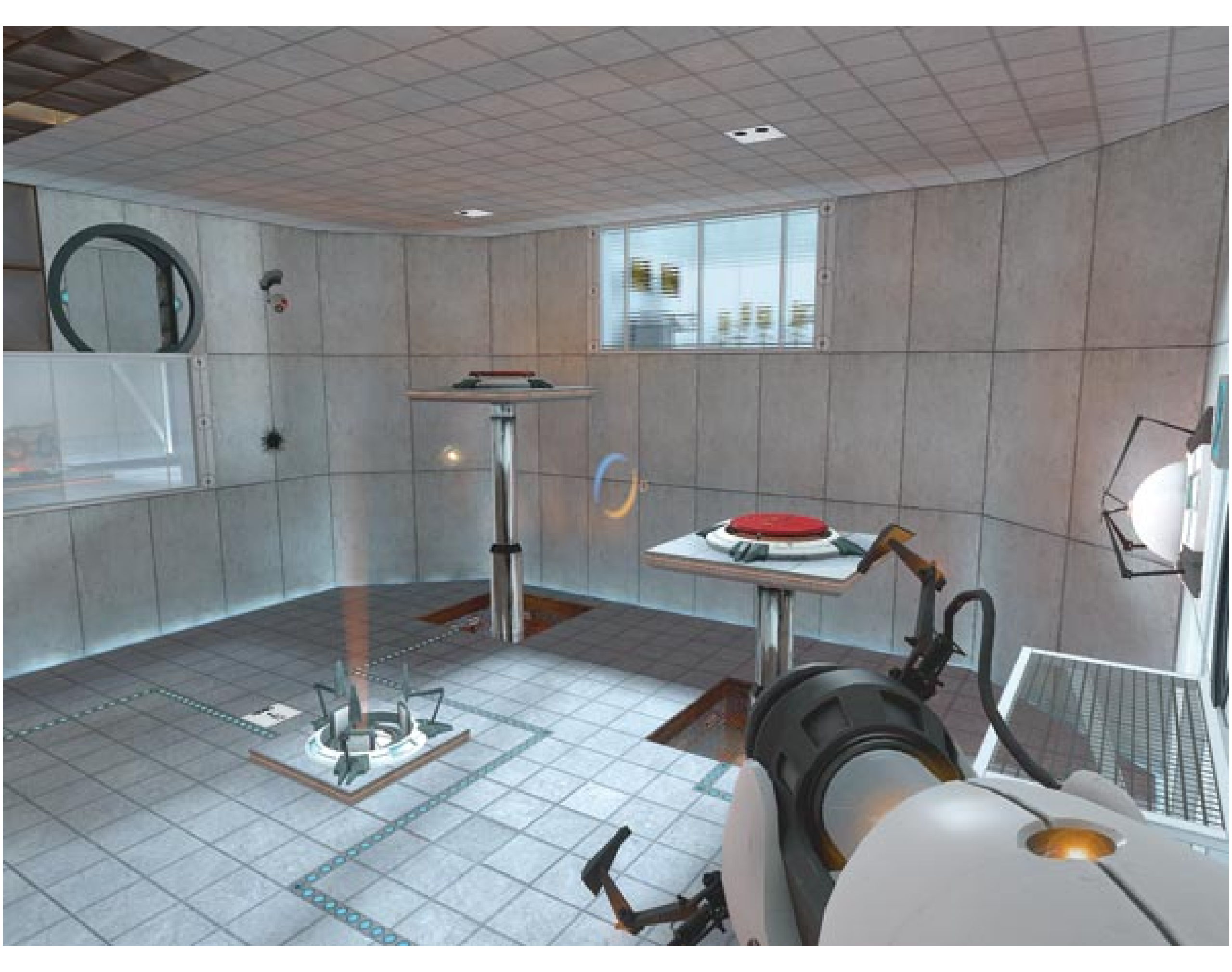
Time Limit: 1:12 or less.

Strategy: To shave the last 50 seconds off your run through, you'll have to wedge-fling into the room containing the Cube when you first enter the large chamber with the turrets and rotating Ball Launcher. Yes, this means you can't activate the Catcher, or kill the turrets.



Extras

Portal Art



Test Chamber 13

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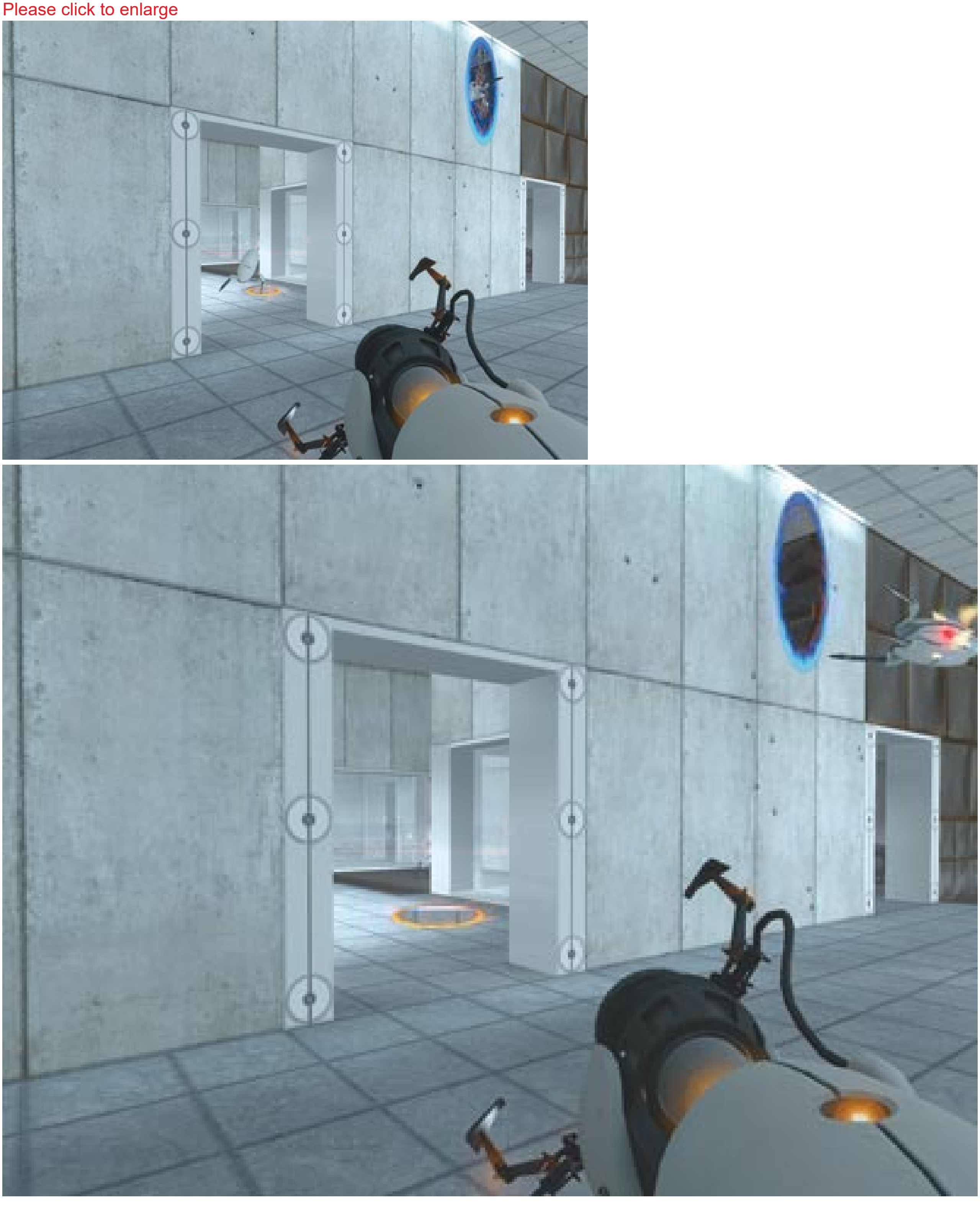

Turret relocation via Portal

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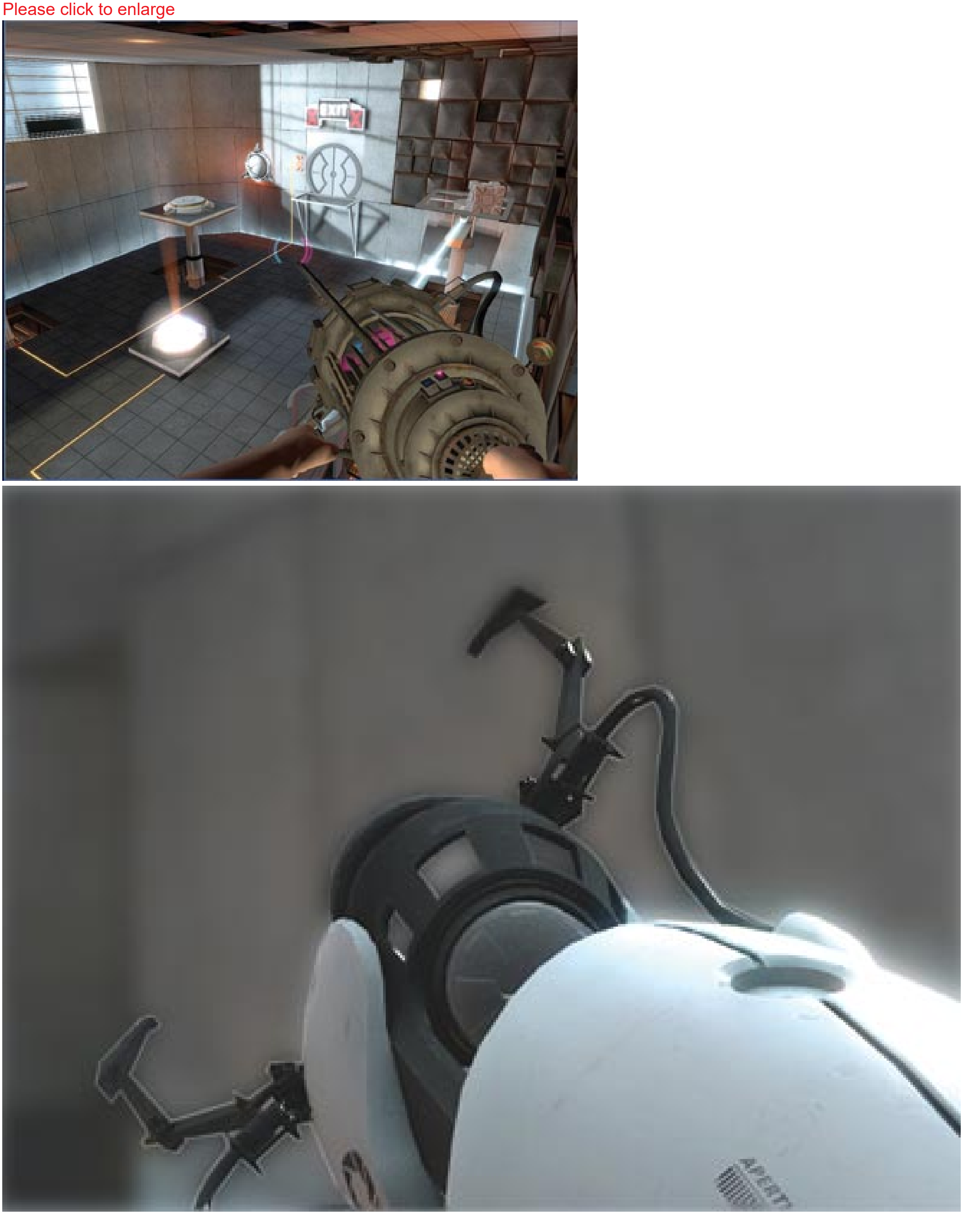

Old and new Portal guns

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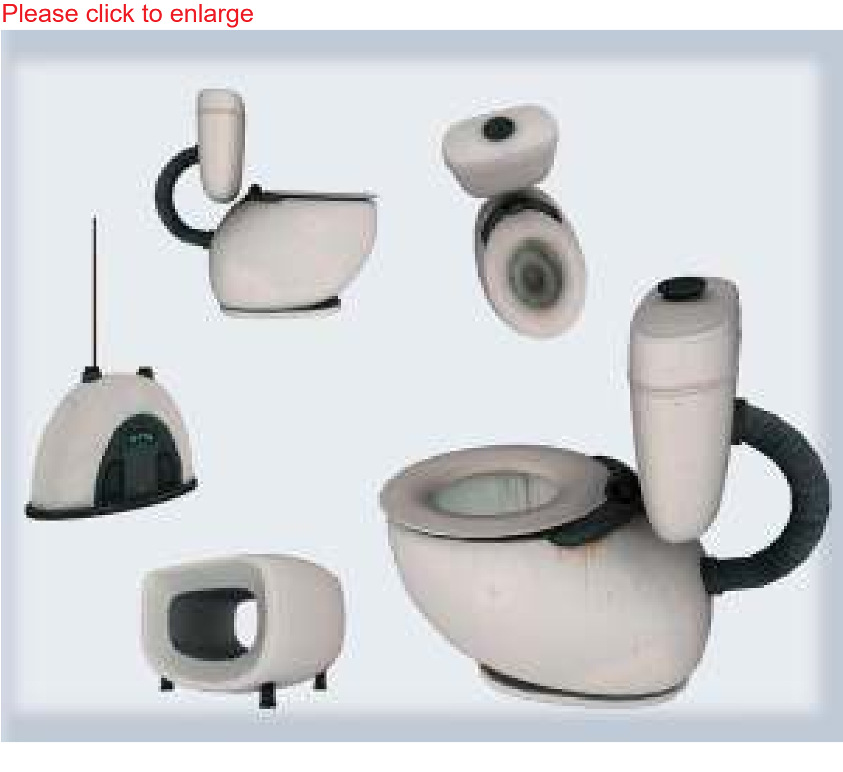
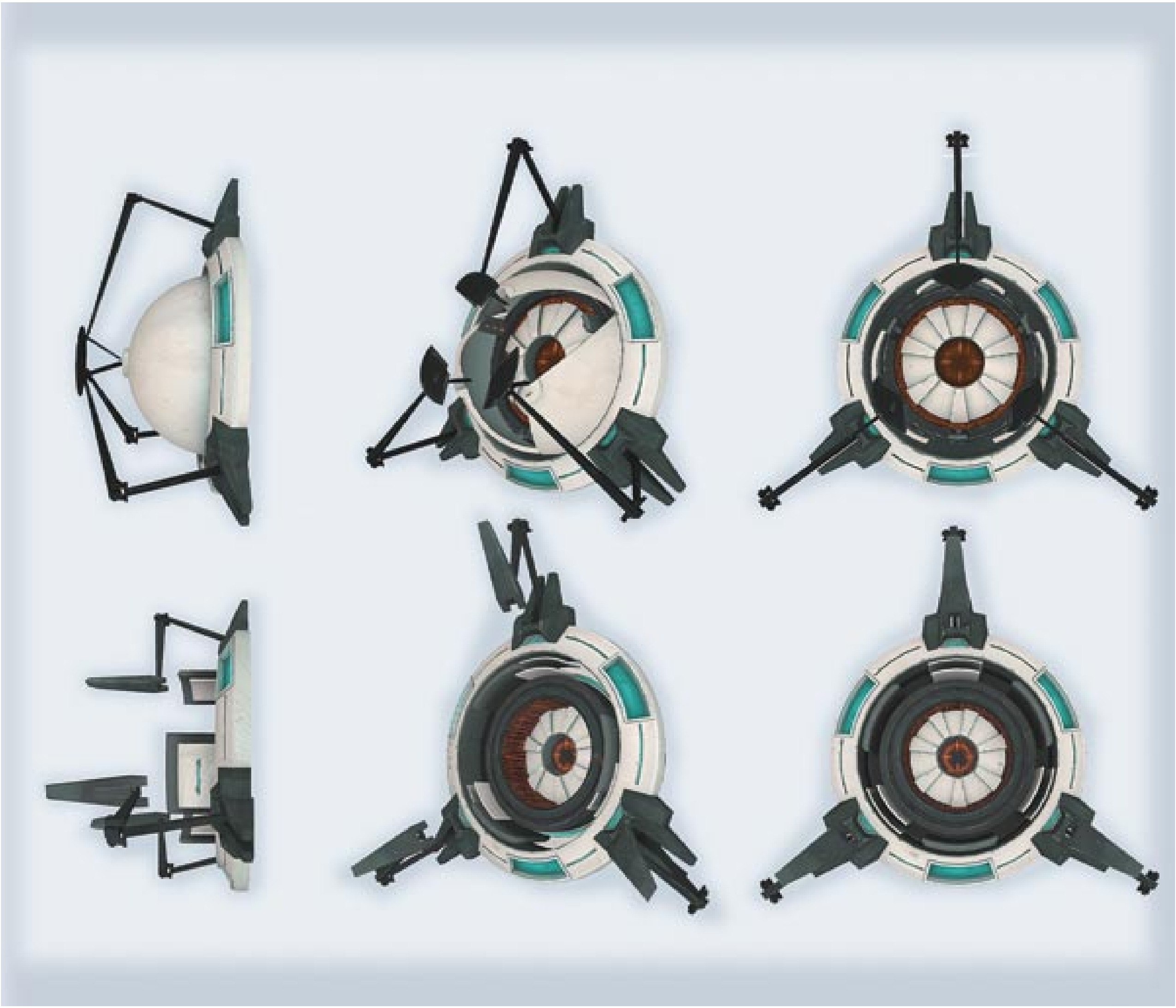
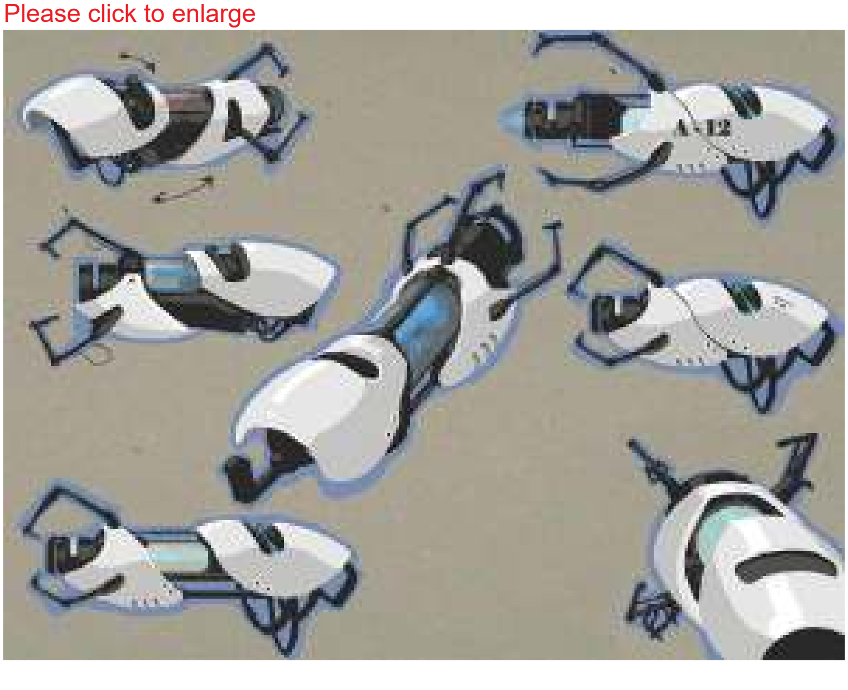


Detail of props in the player’s chamber at the start of the game. Designed to fit Portal’s slick aesthetic, these distinctive items help the player recognize the chamber where they started after walking through a portal for the first time.

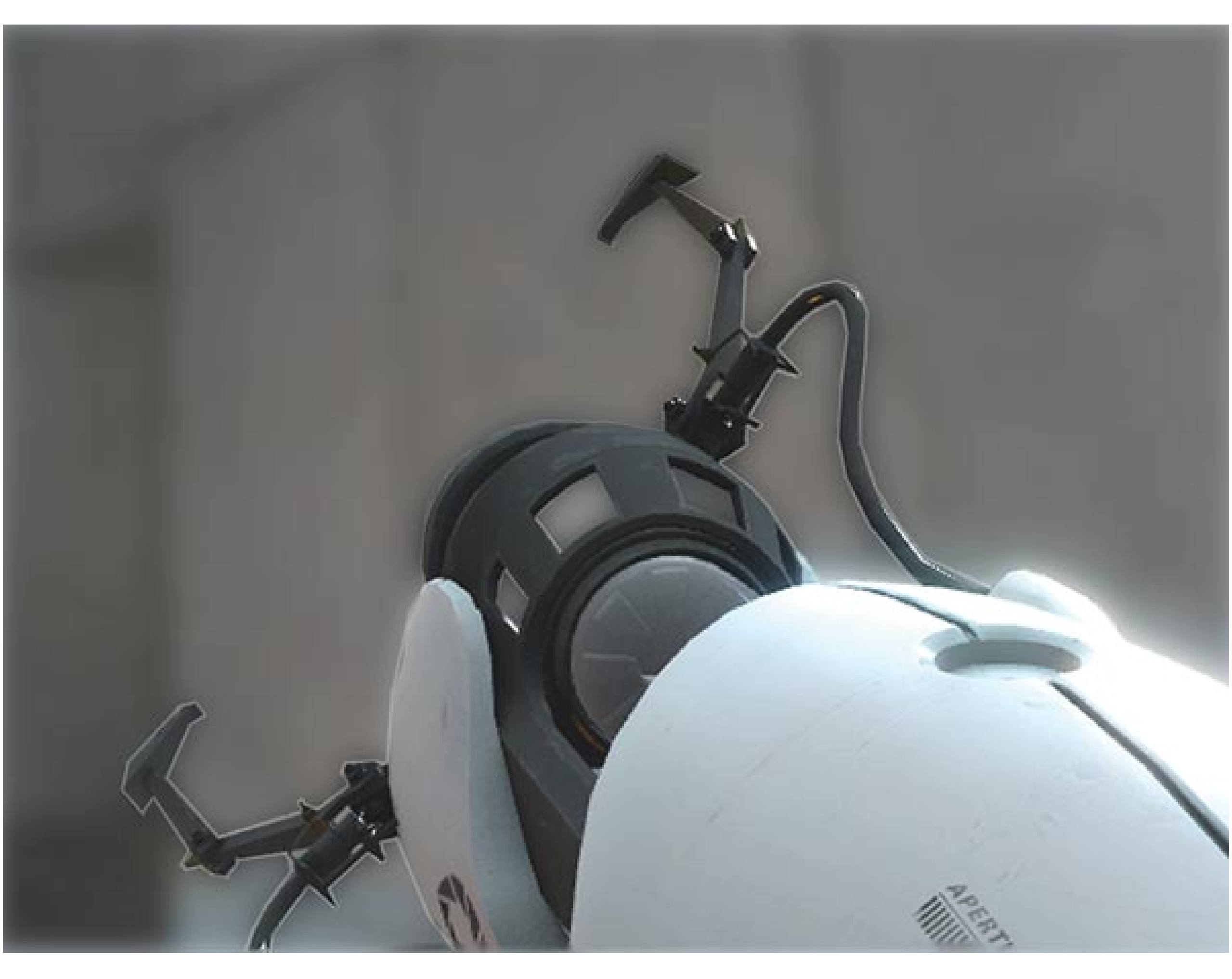


Detail of the energy ball launcher and catcher that the player encounters at many points during Portal. Designed to look like a cohesive set, the devices activate lifts and unstationary scaffolds.

Please click to enlarge

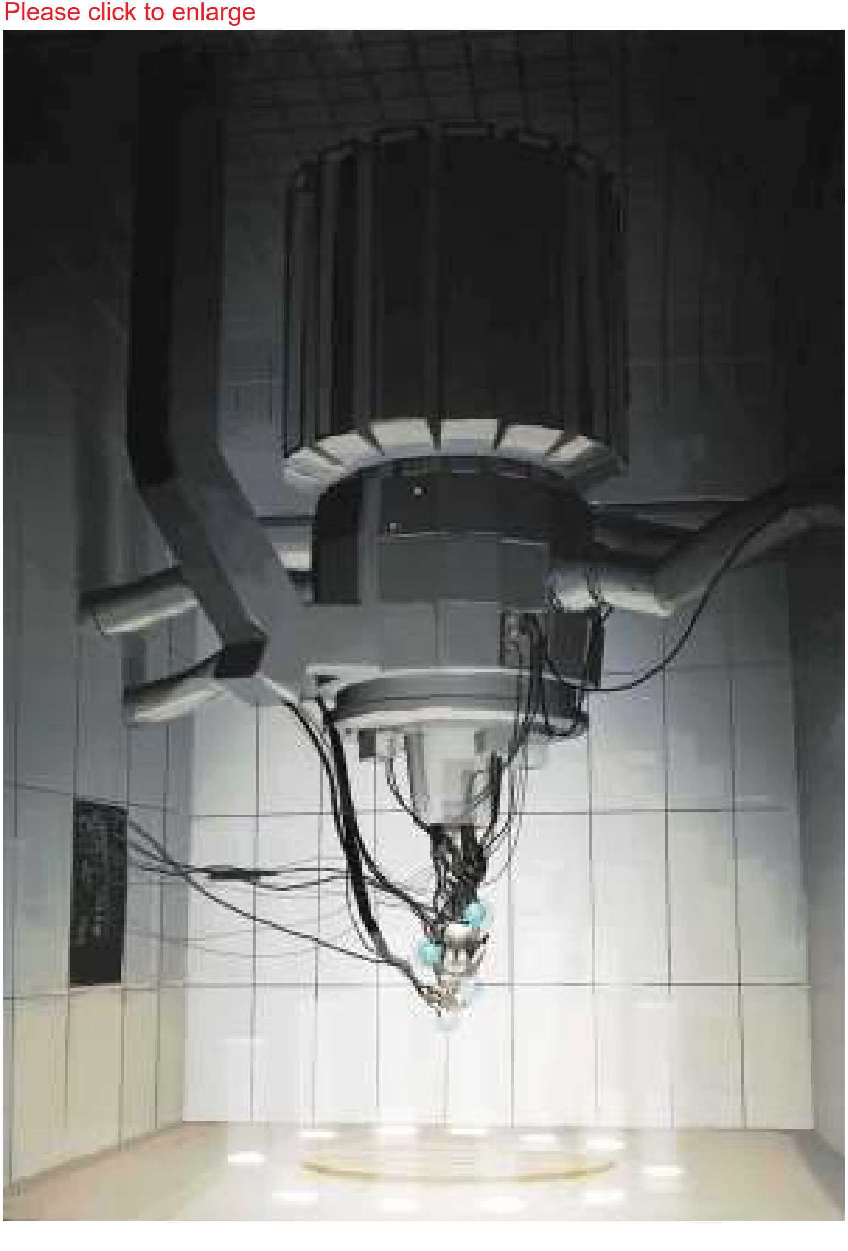


Sketched concepts of the portal gun. The Portal team went through many iterations in the design of the device.

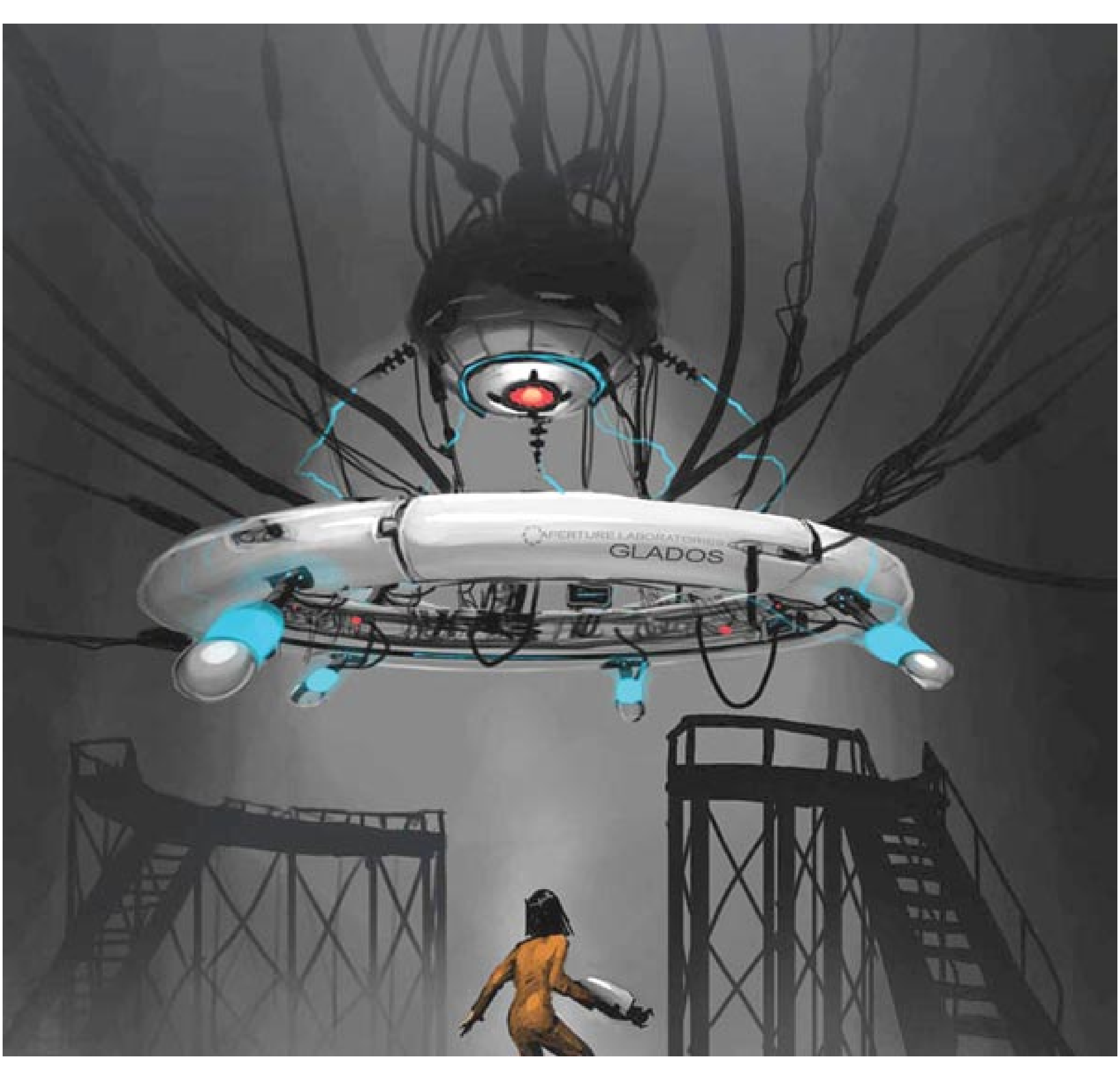


The final design of the portal gun integrates the gravity-gun prongs and the clean lined monochromatic Portal prop aesthetic. The indention on the top of the portal gun, as well as the glass tube, display the color of the portal that you last shot.

Please click to enlarge

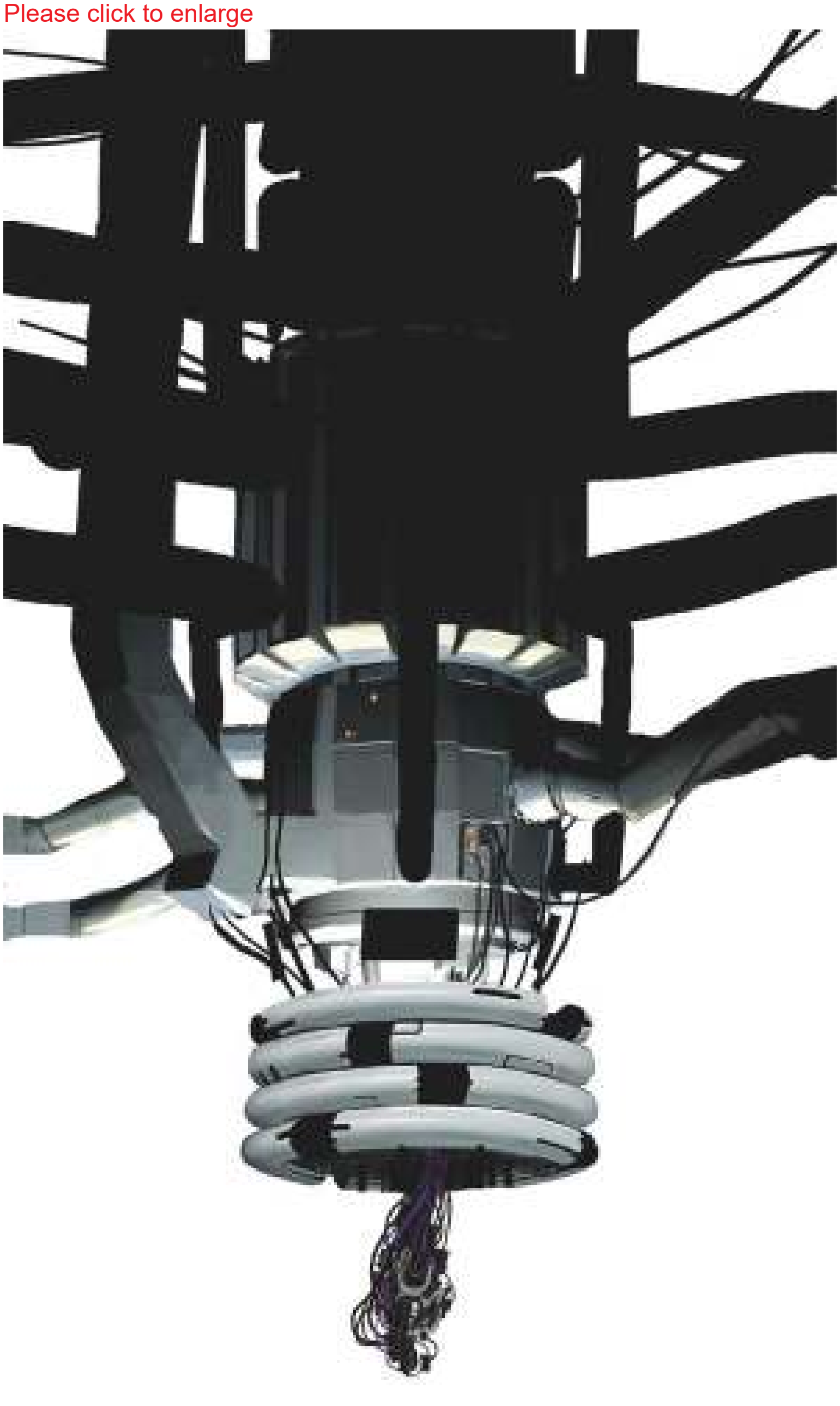


One of many concept studies for GLaDOS. As a central character in Portal, the design team wanted to build a space that brought a great deal of attention to her. GLaDOS’ body is designed to look highly complicated and mechanical, yet, at the same time, feminine.



As the Portal team evolved the design of GLaDOS, they incorporated a large disk into her form. Ultimately, the team felt that her form, as shown, was too small.

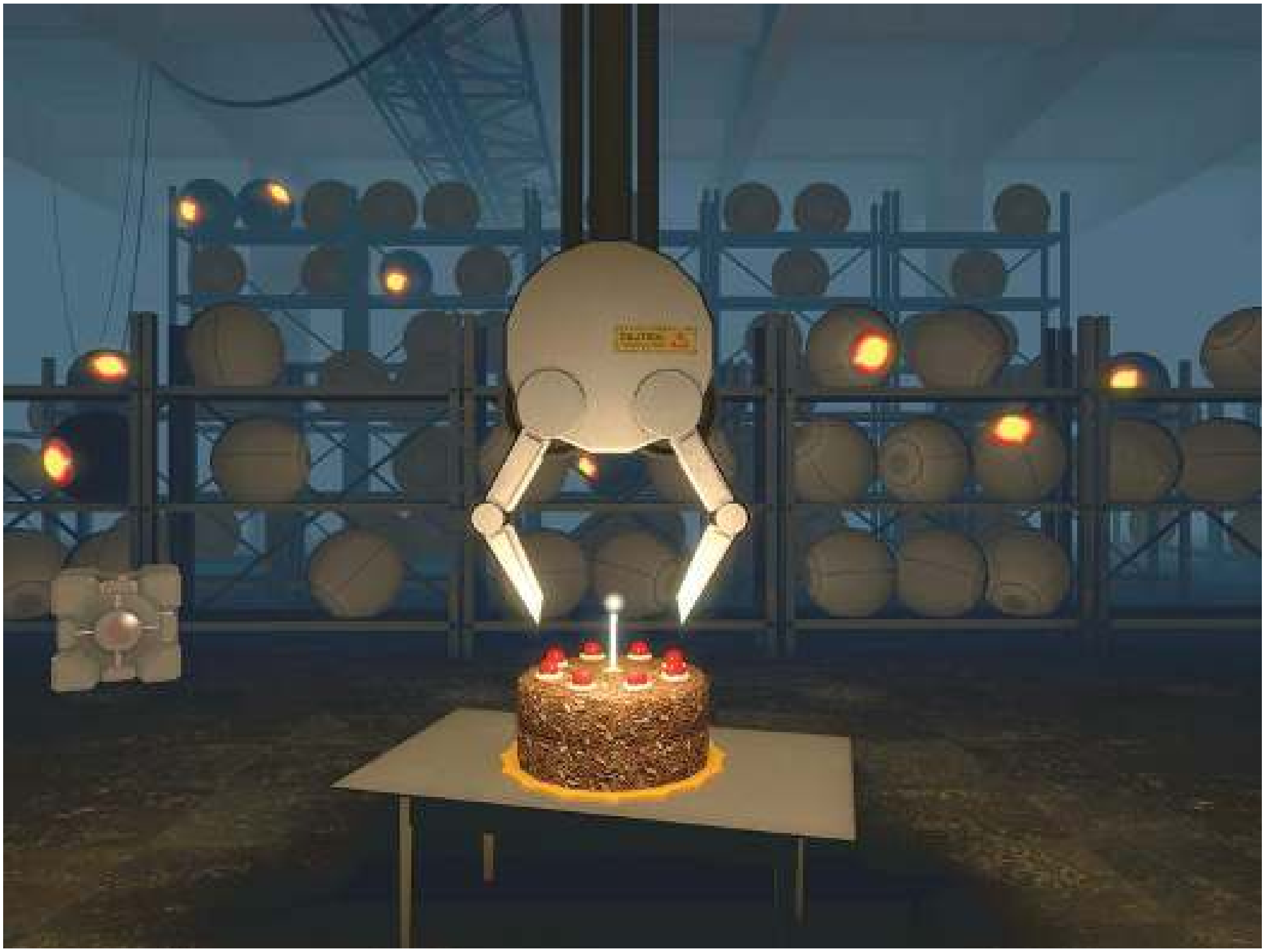
Please click to enlarge



A nearly final design concept of GLaDOS. The Portal team retained the more complicated body from the first concept image while incorporating the disk elements to represent each aspect of GLaDOS’s personality modules.

Extras

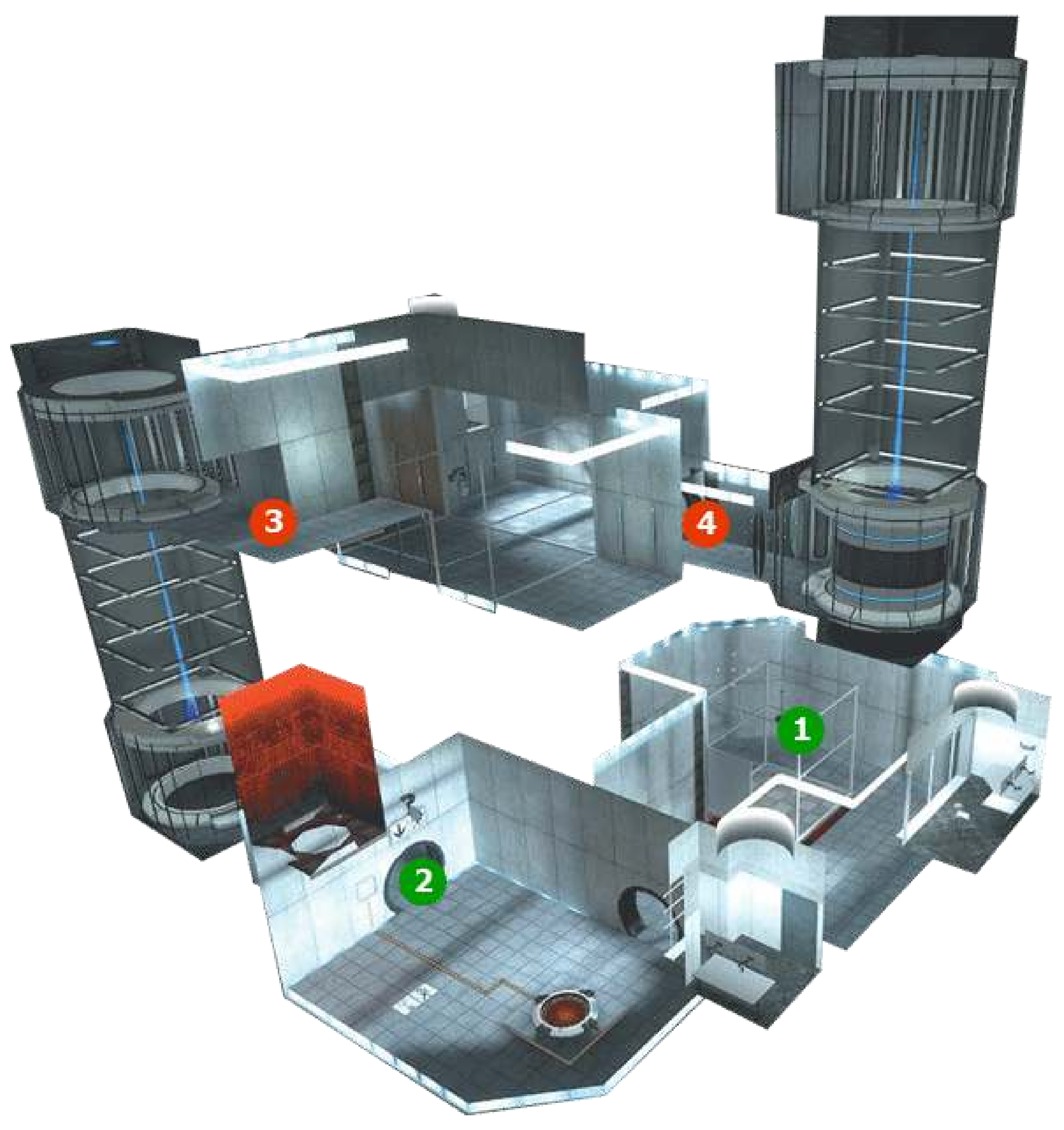
The Cake is No Lie



The cake is not a lie.

Test Chambers

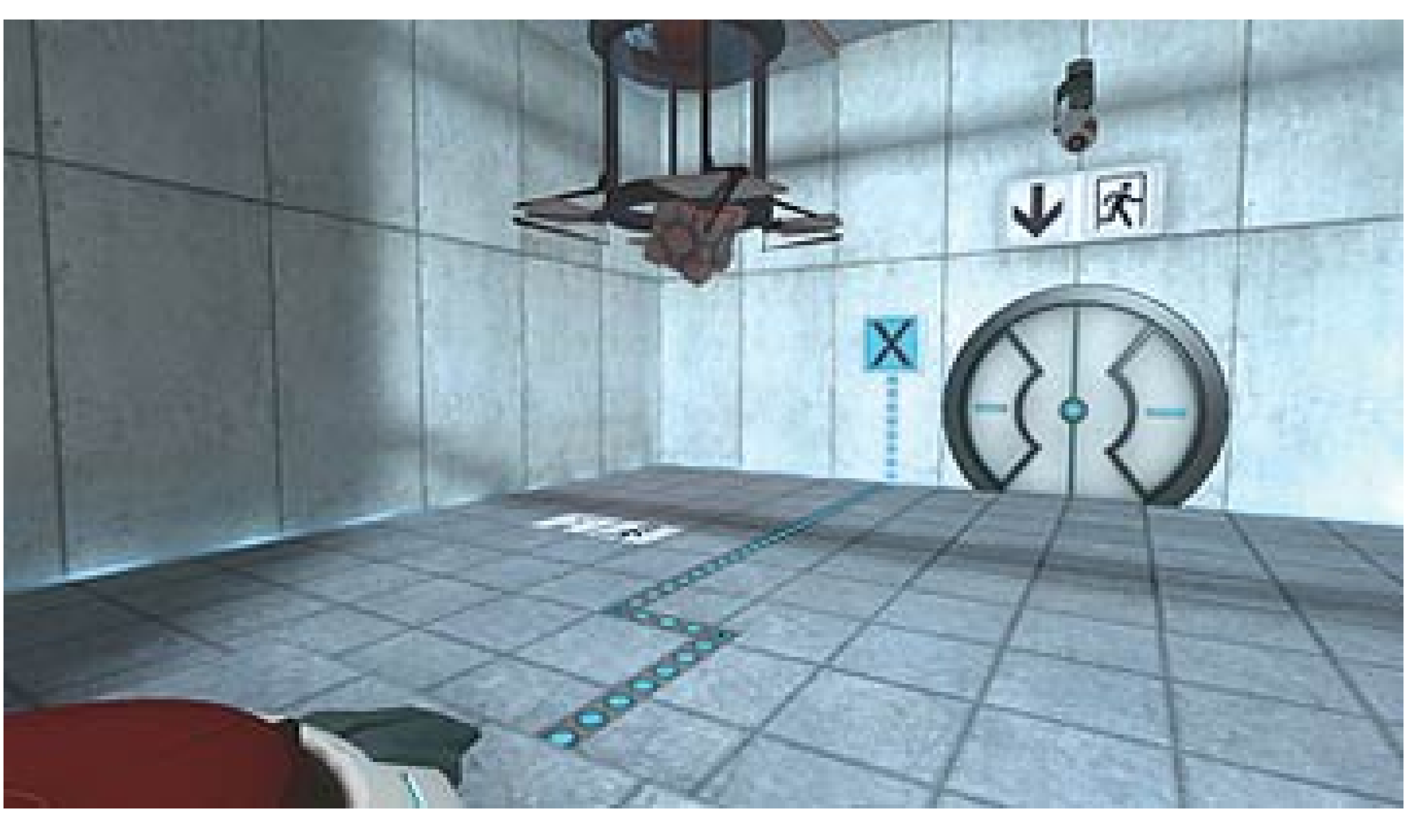
Chambers 00-01

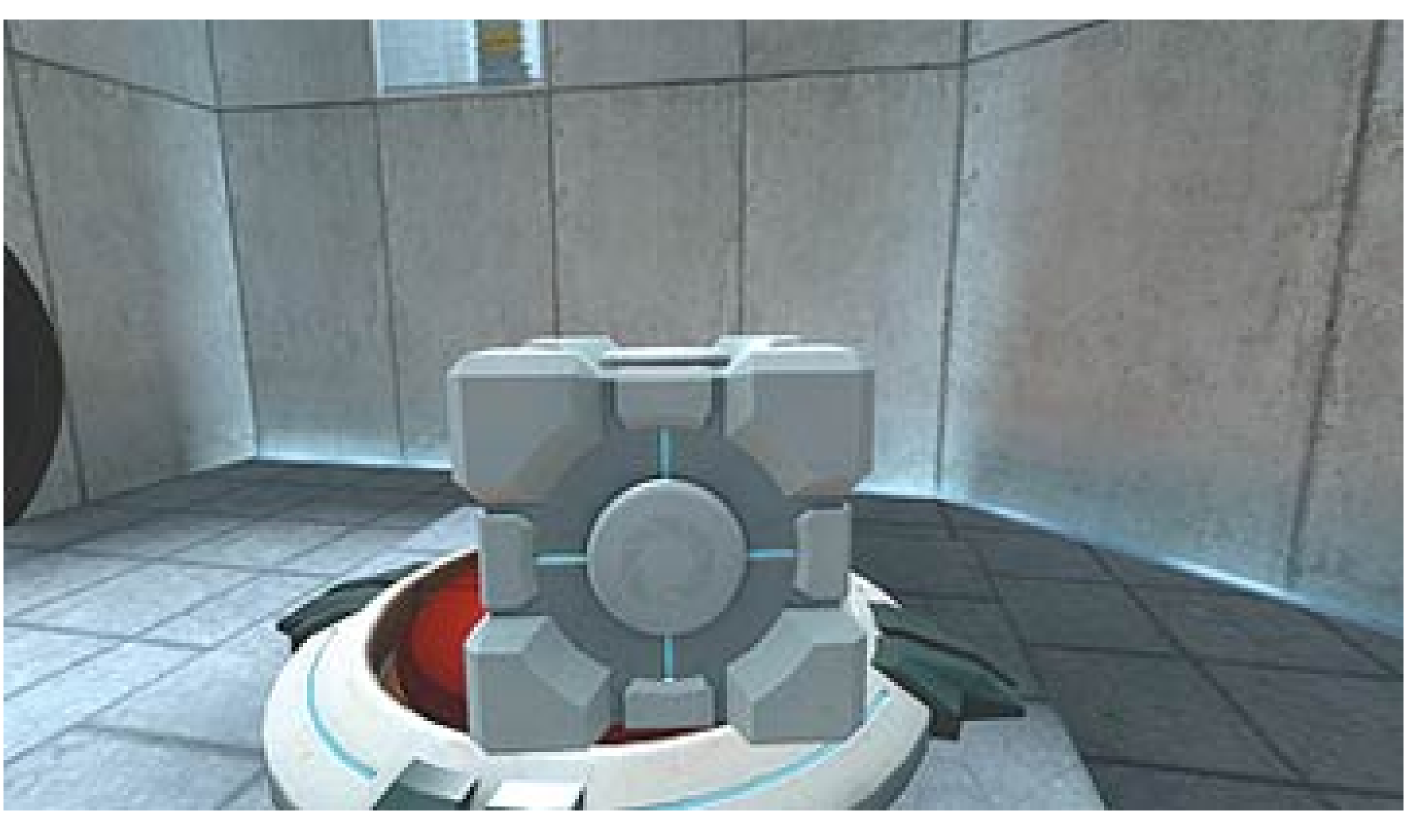


1. Test Chamber 00 Startpoint
2. Test Chamber 00 End Point
3. Test Chamber 01 Start Point
4.Test Chamber 01 End

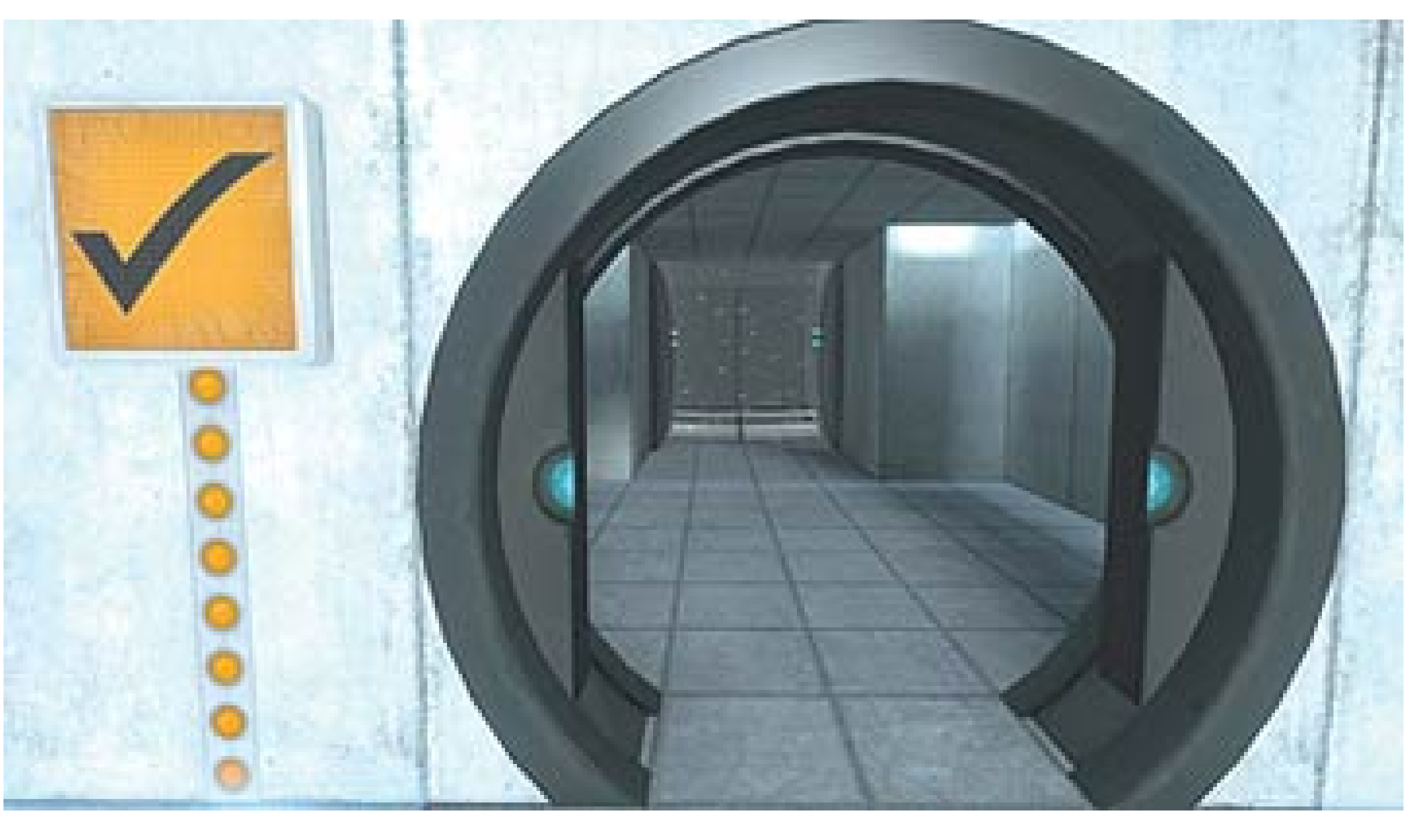
Test Chamber 00

You wake up in a cold, sterile chamber, completely barren save for a bed pod, toilet, and radio. You have no choice but to heed the call of the synthesized voice over the PA as it beckons you out of the orange portal.



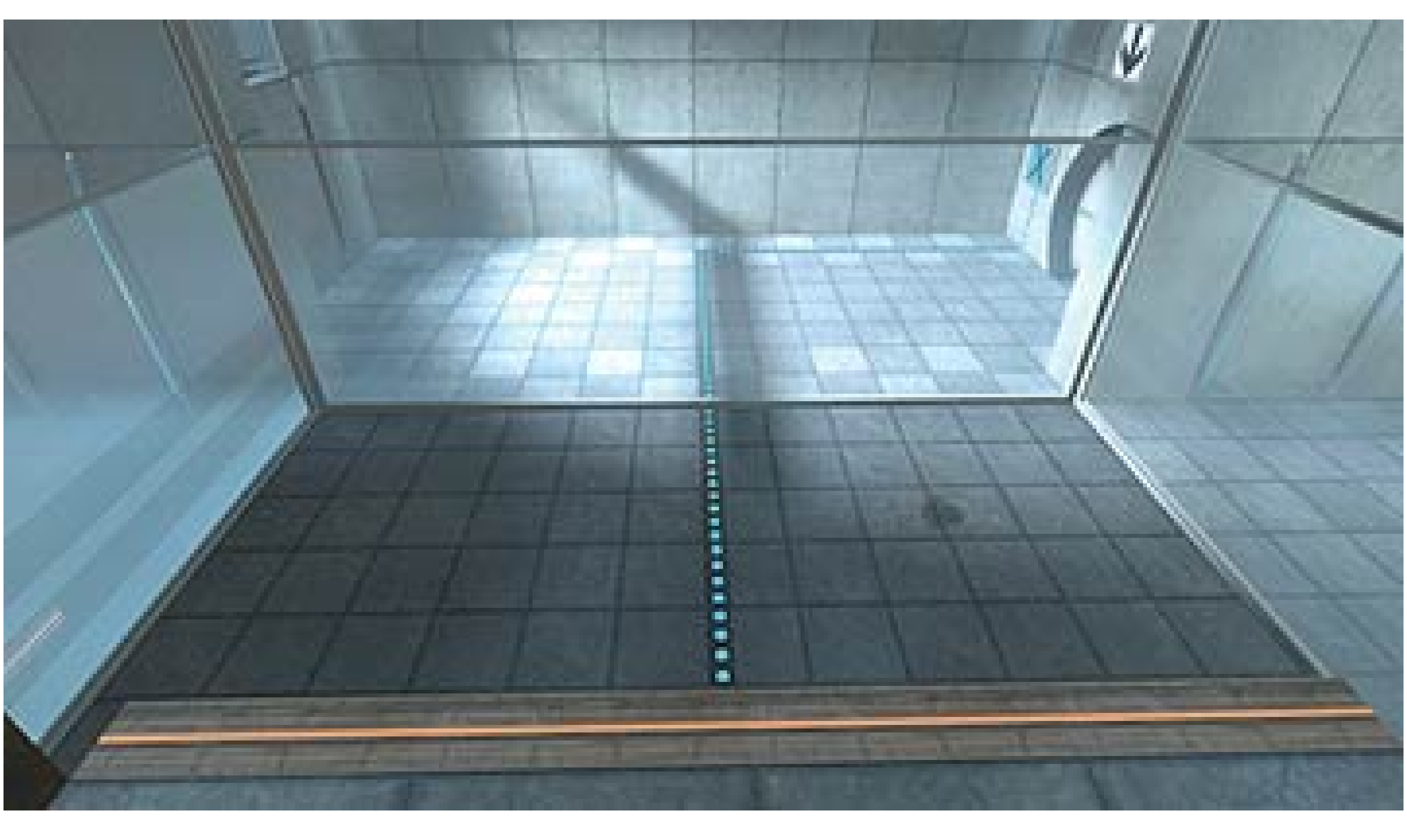


Walk through the circular door and into the next room. When you pass the large button on the floor, the Aperture Science Vital Apparatus Vent drops a Weighted Storage Cube at your feet. Pick it up by pressing INTERACT BUTTON, and drop it on the red button.

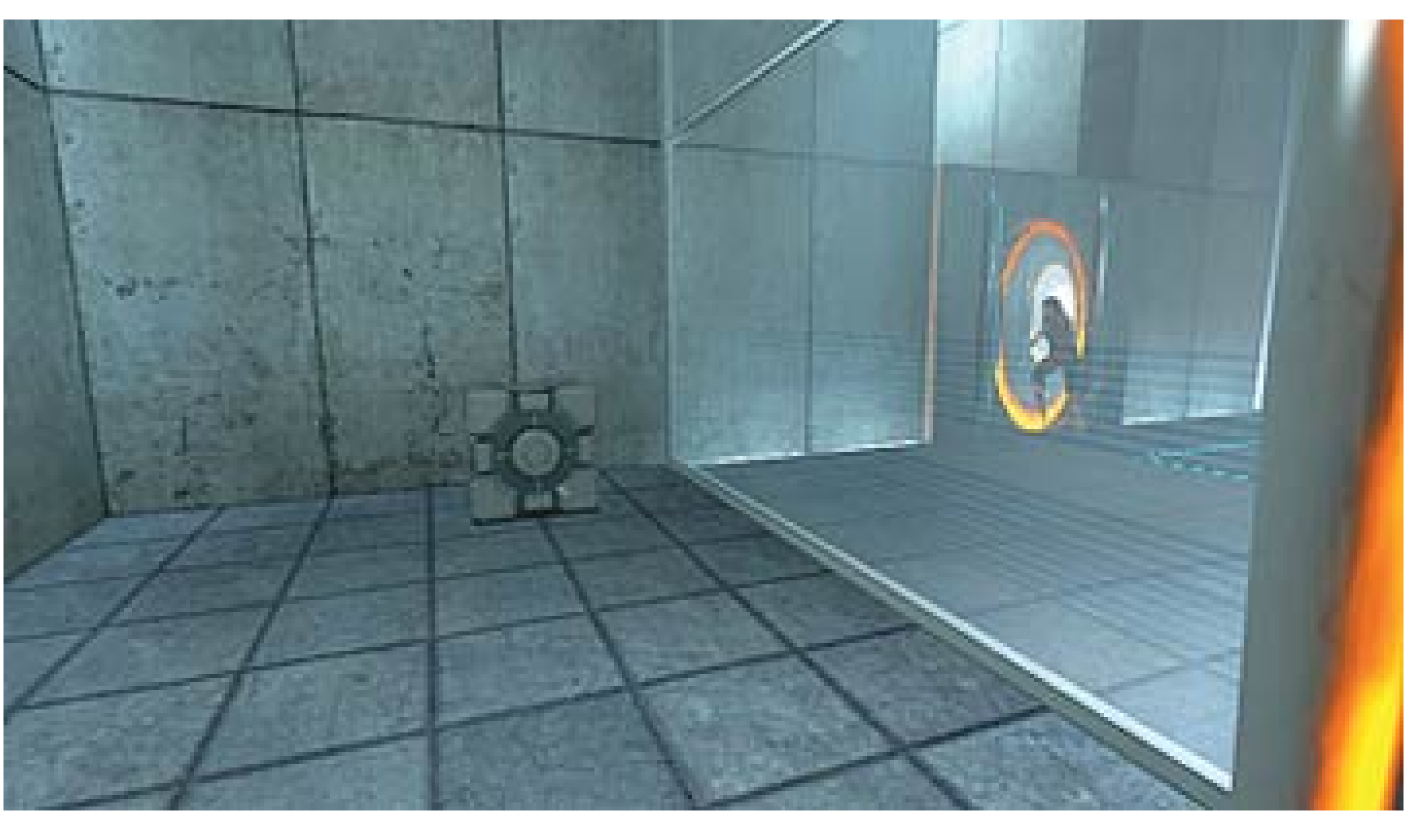


Head through the blast door that just opened, and proceed through the Aperture Science Material Emancipation Grid into the elevator. Congratulations—you have just solved your first puzzle in Portal. Rest assured that it will only get more challenging from here.

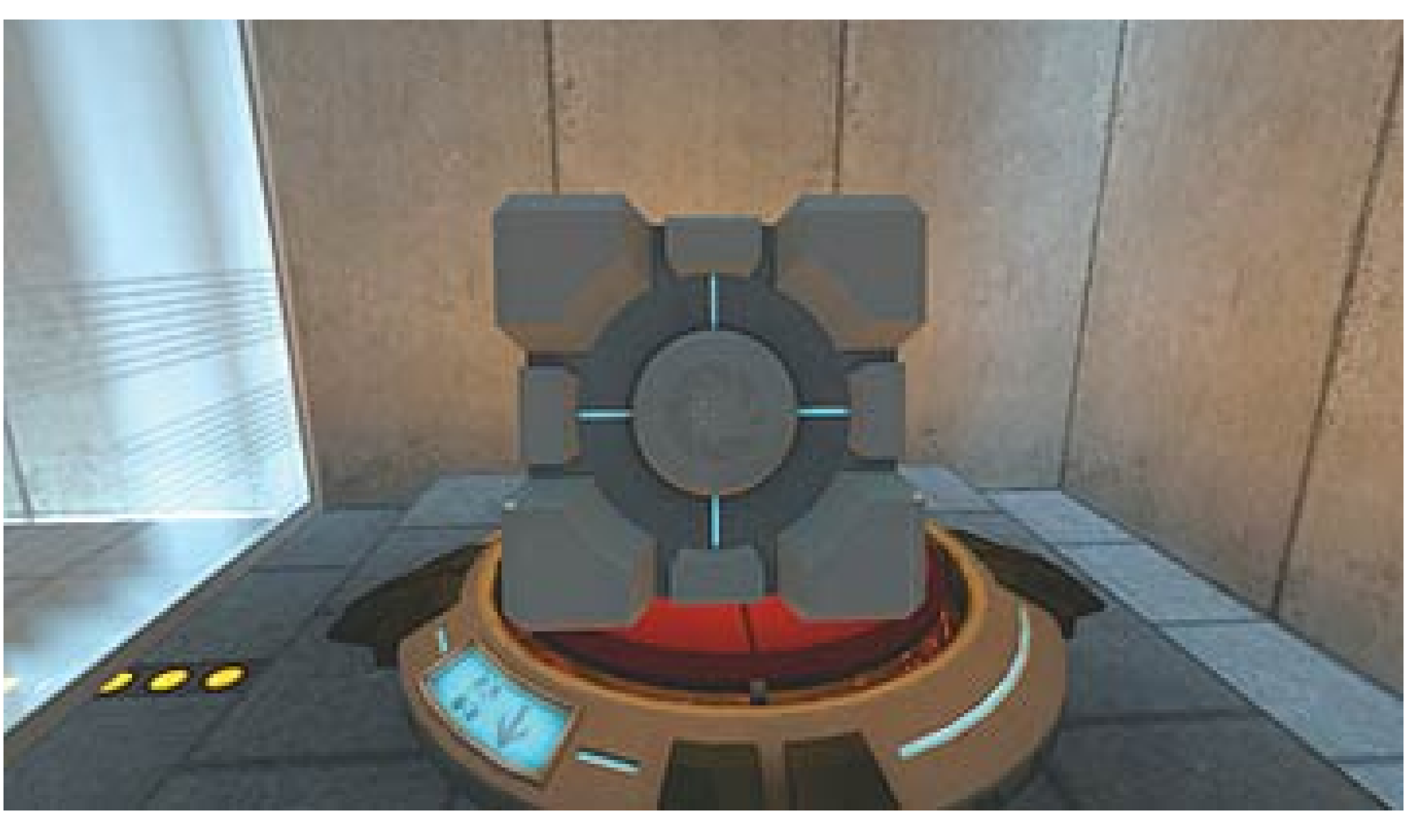
Test Chamber 01



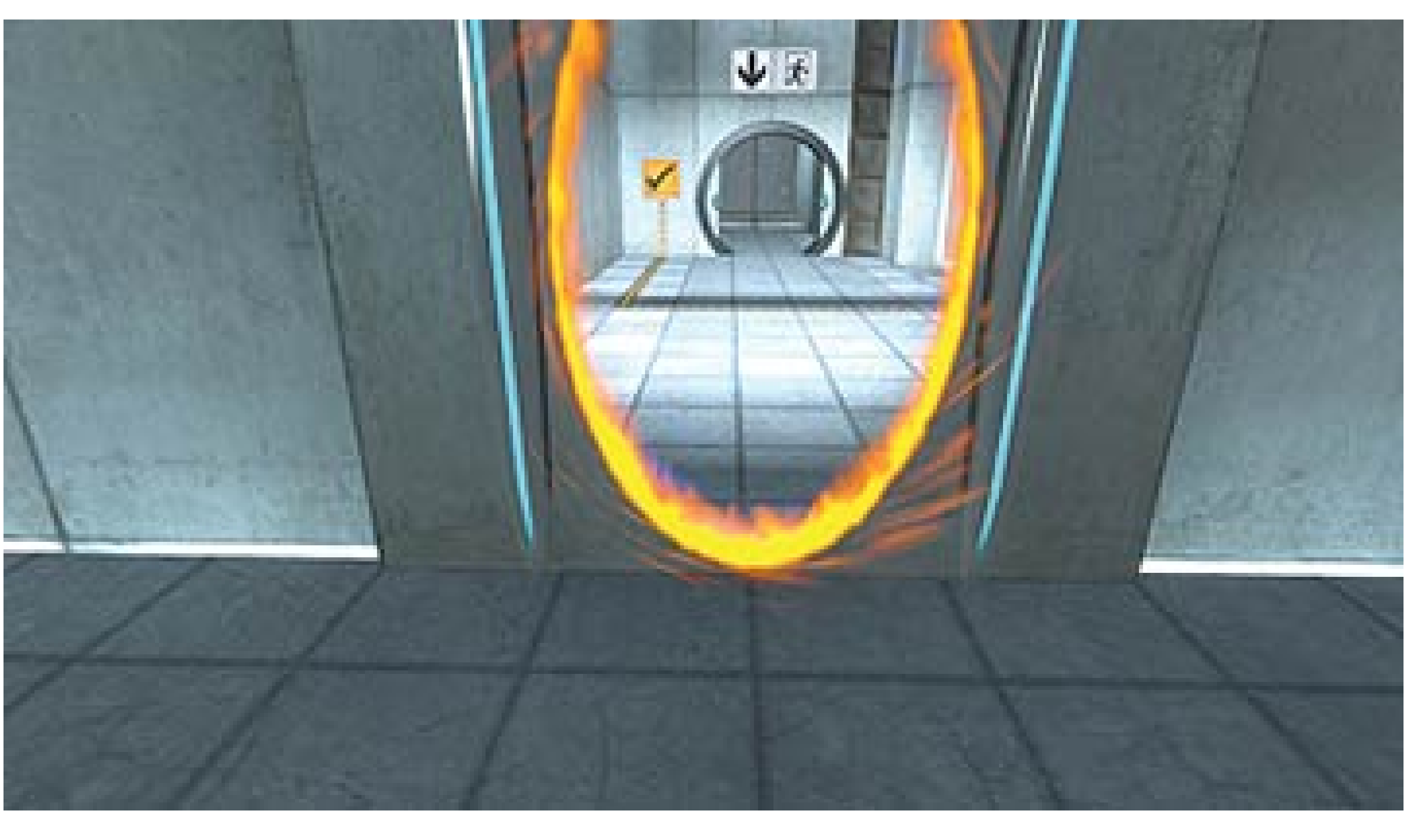
Exit the elevator and drop into the glass-enclosed chamber ahead of you. Turn 180 degrees, and you see a orange portal on the wall in front of you. The blue portal that is the orange portal's destination is alternating between three locations: the room to your right, which houses a red button; the room to your left, containing a Weighted Storage Cube; and the room behind you, which leads to the exit.



When you can see the Storage Cube through the orange portal, run through it, snatch up the cube, and exit back out.

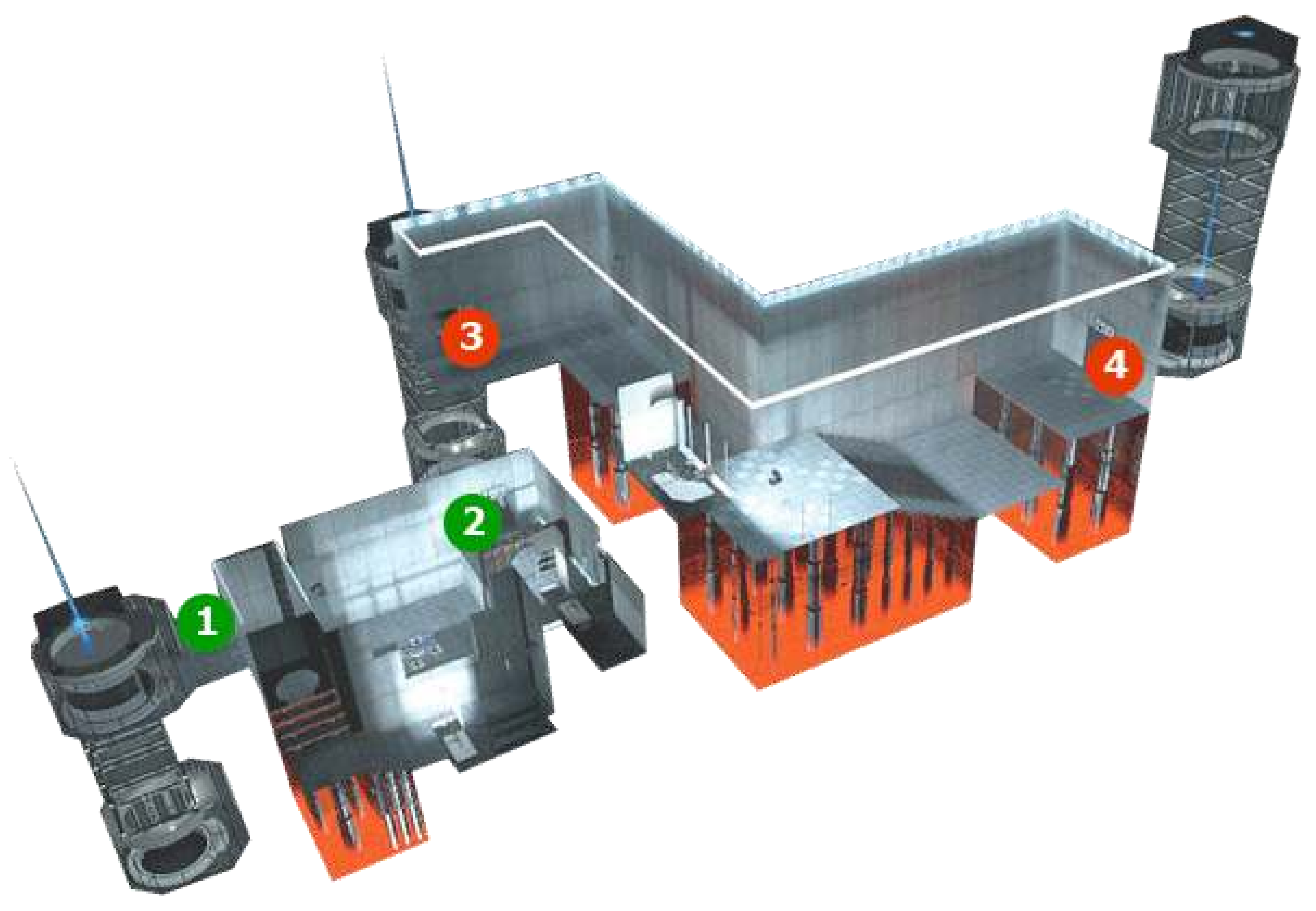


Wait till you can see the button through orange portal in the main chamber, then run in again, depress it with the Storage Cube, and leave once more.

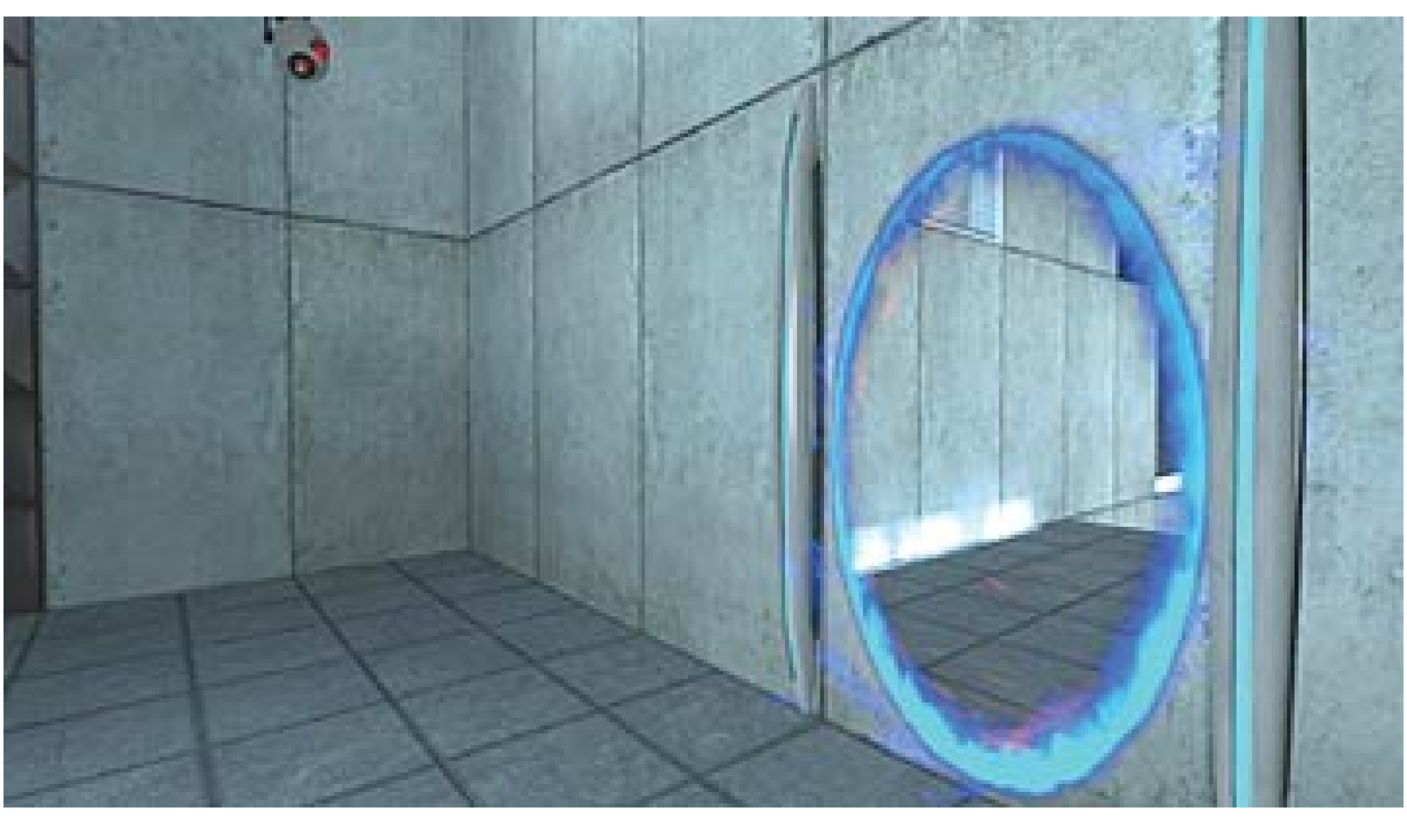


In a moment, you'll be able to see the exit door through the orange portal. Proceed through it, and you're home free.

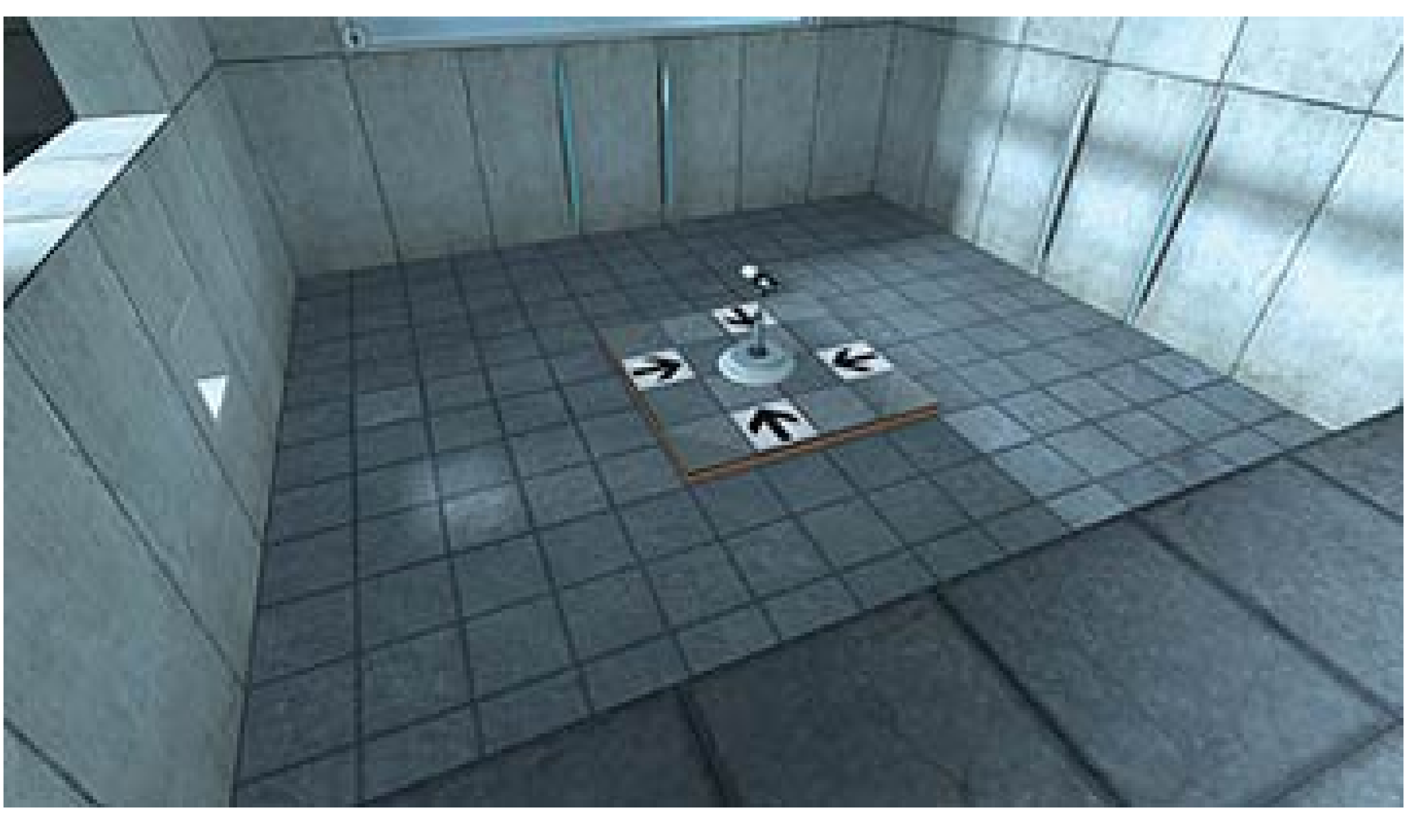
Chambers 02-03



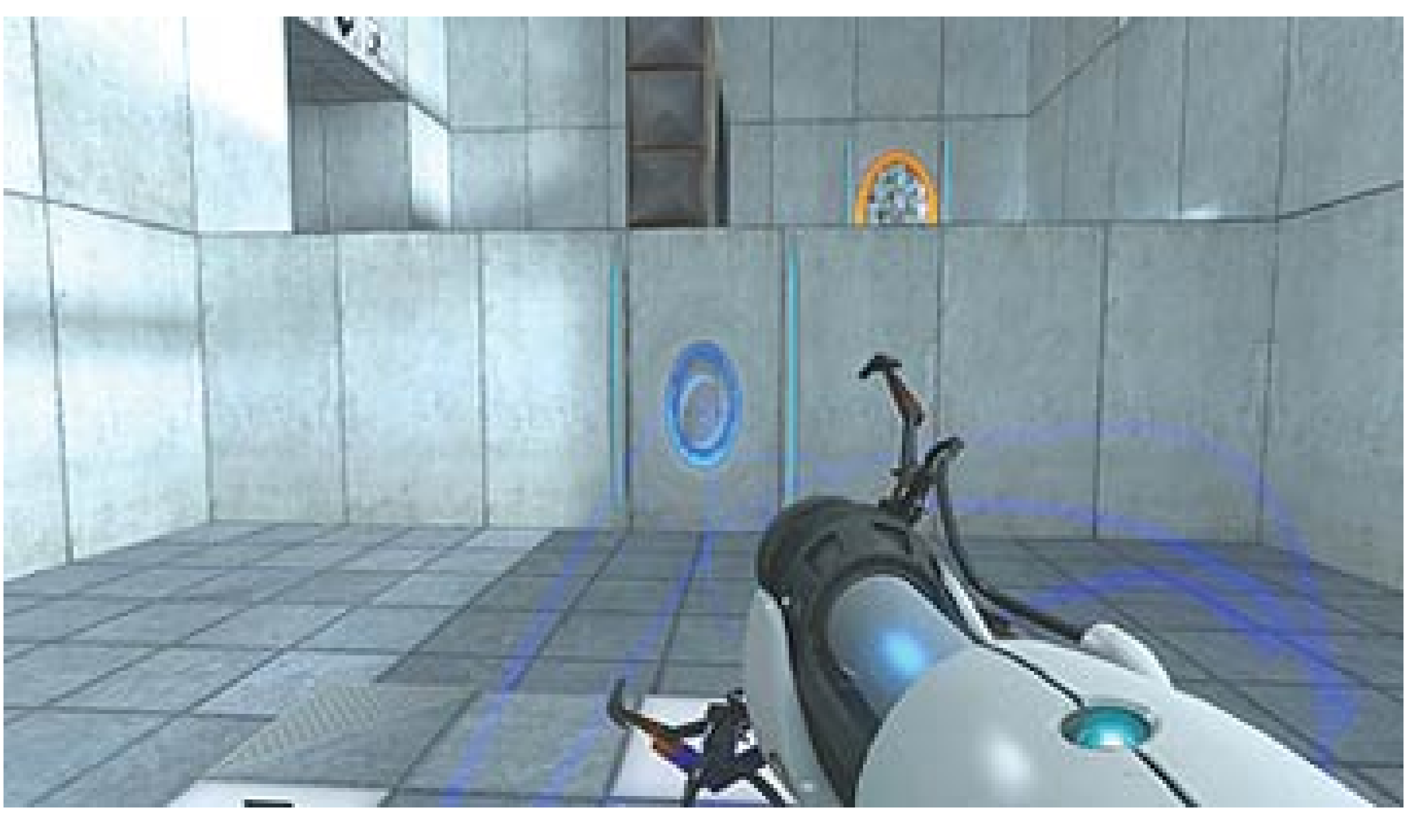
Map Legend
1.Test Chamber 02 Start Point
2.Test Chamber 02 End Point
3.Test Chamber 03 Start Point
4.Chamber 03 End Point

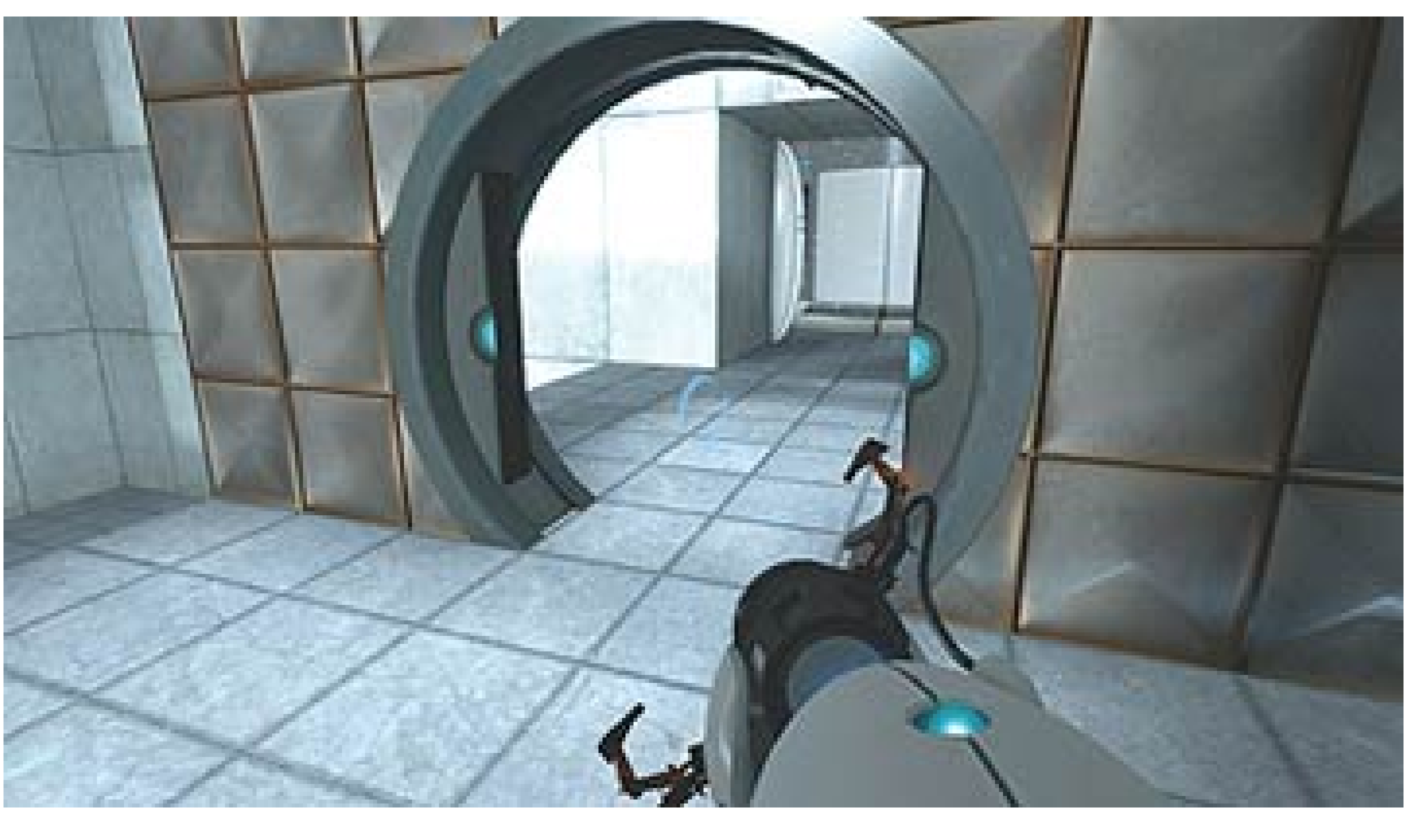


Turn right after exiting the lift and wait patiently for the blast doors to open. When you reach the bottom of the stairs, you should see a blue portal between two lightly illuminated metal bars. If you don't see it immediately, wait a moment, and it will pop up. Proceed through this portal.

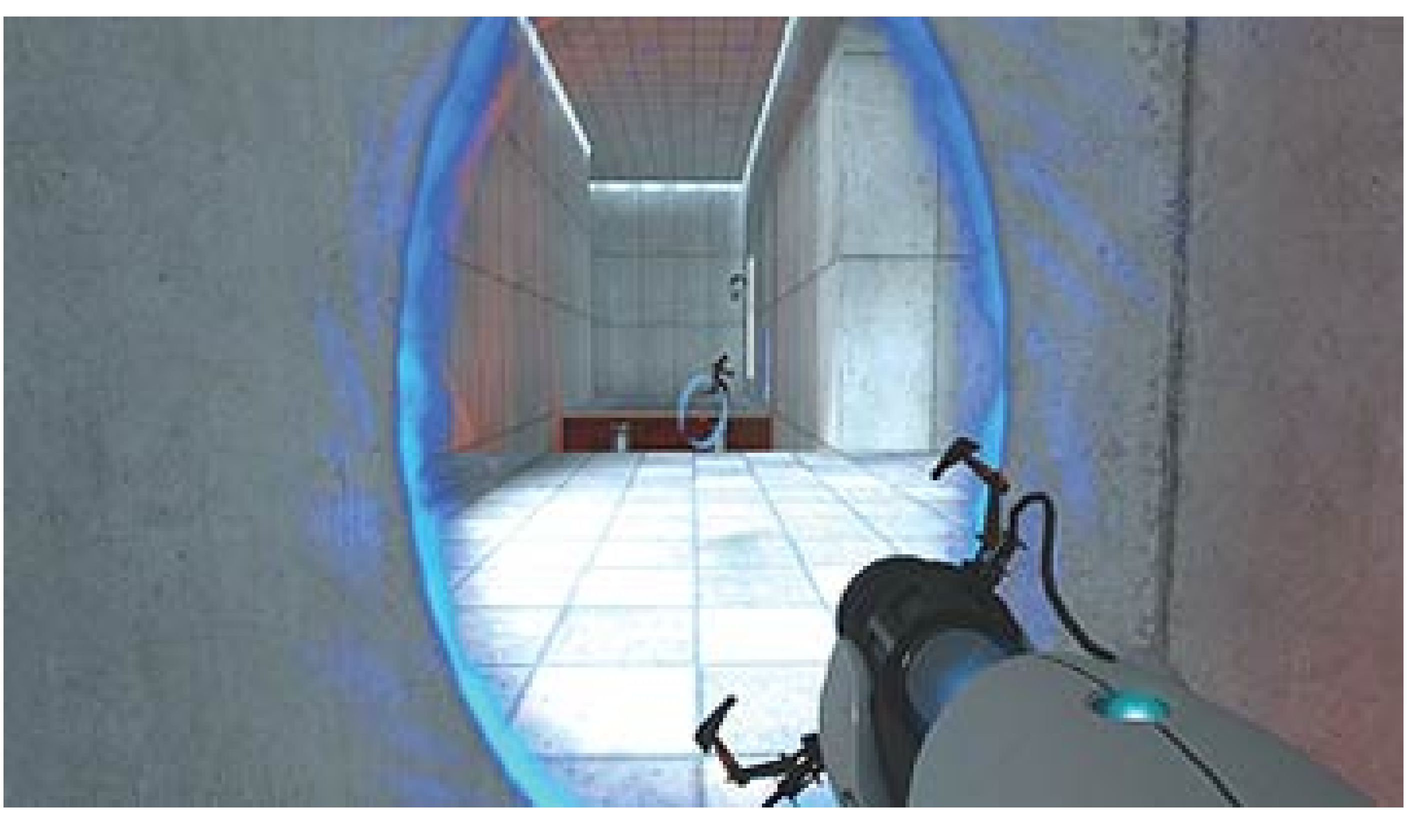


Ignore the blast door to your right for now, after emerging through the orange portal You have to keep your eye on the prize: The Aperture Science Handheld Portal Device (AKA the portal gun) is in the pit below you, just off the edge of the surface you're standing on. Jump down and grab it.

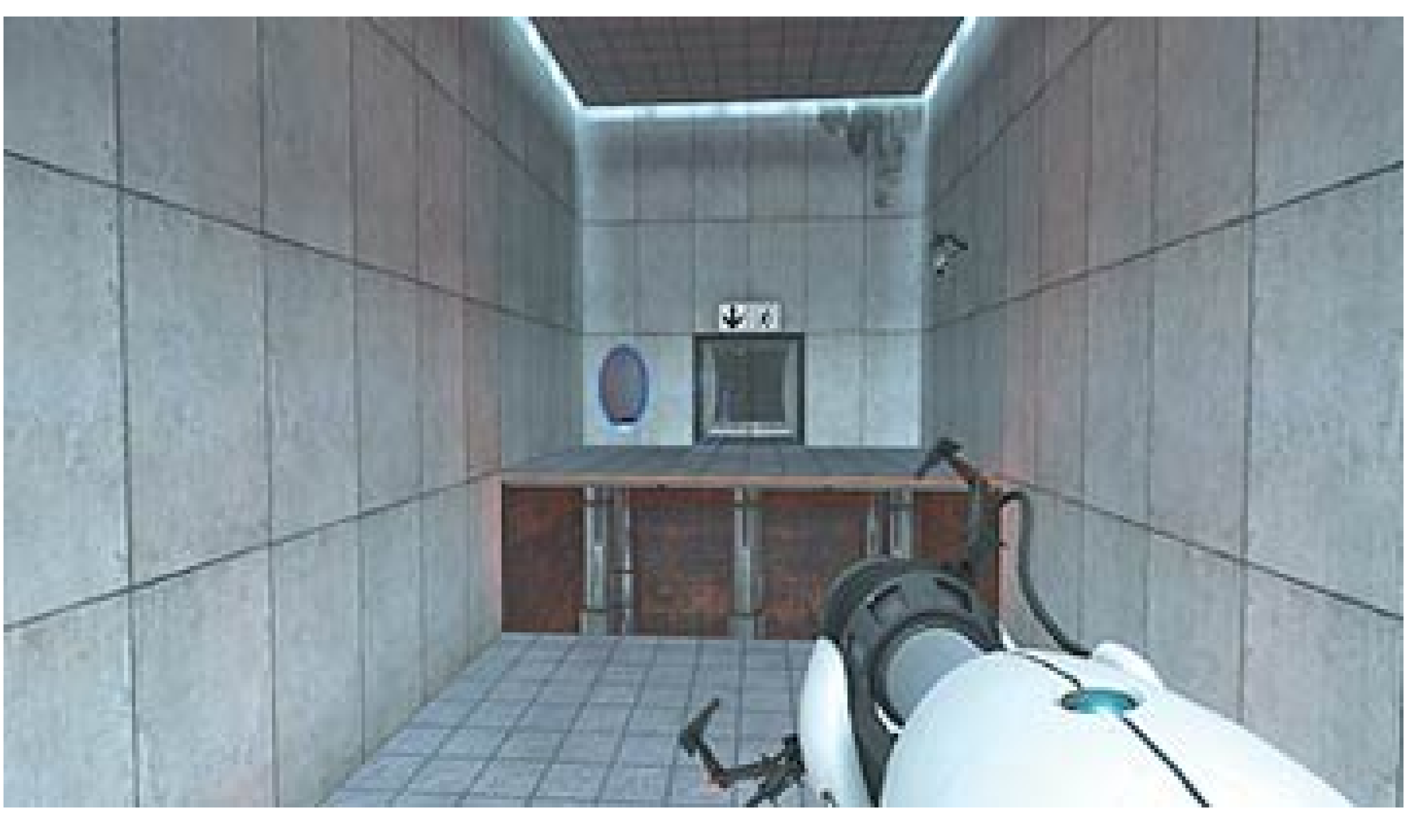




Rejoice in the fact that you're now strapped with a half-functioning portal gun. Simply press FIRING MODE 1 to place a blue portal anywhere you wish. Note, however, that it is not possible to deploy them on certain types of surfaces. You know the surface you're pointing at is OK when the outline of your oval-shaped reticle is filled in. Fire a blue portal anywhere within reach, then emerge through the orange portal that originally led you into this room. Turn right and exit the Test Chamber.



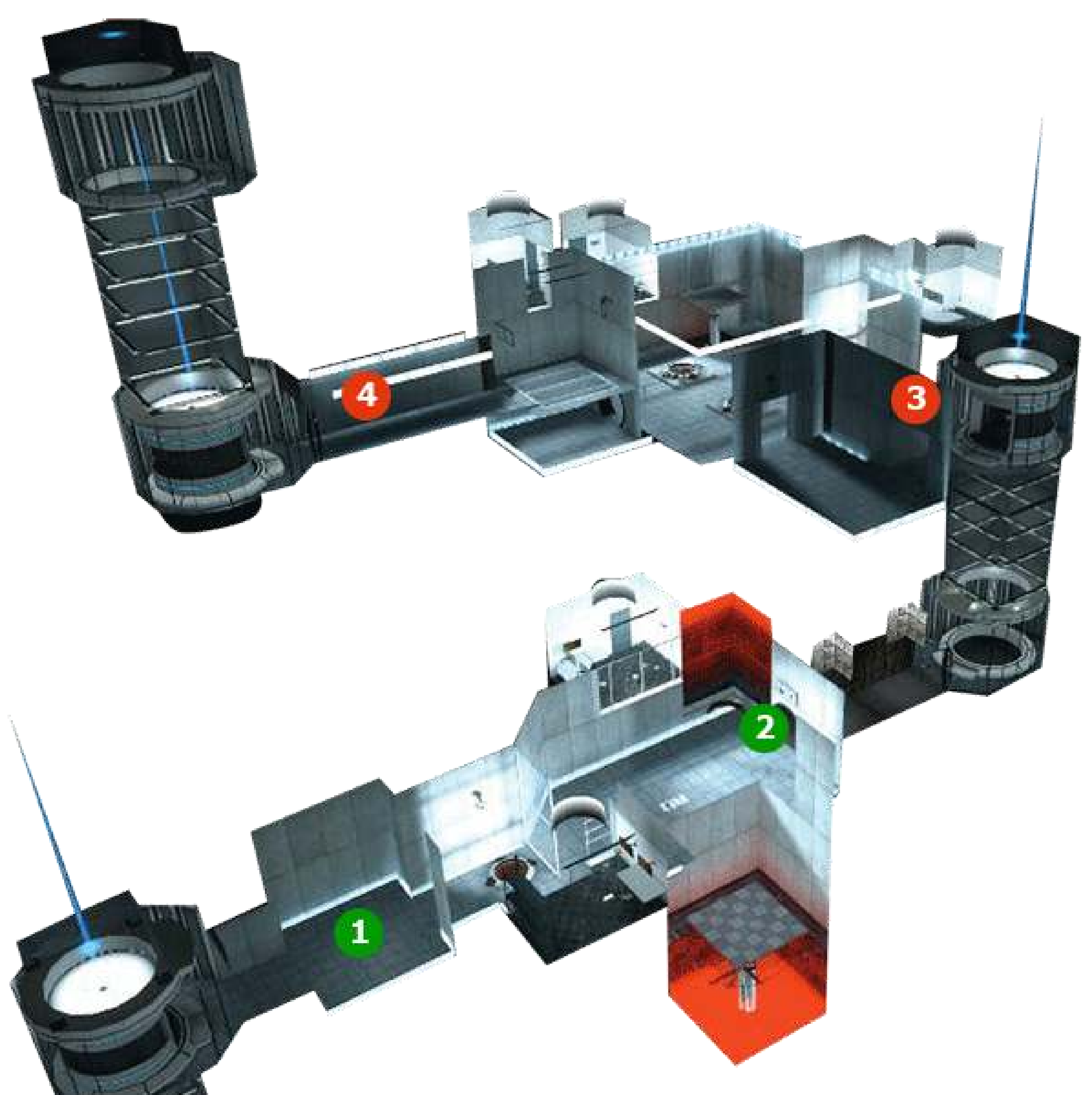
When you exit the lift, you're immediately presented with an impossible-to-jump gap. Luckily, there's a orange portal just beyond it. Fire a blue portal on your side of the gap, and walk through.



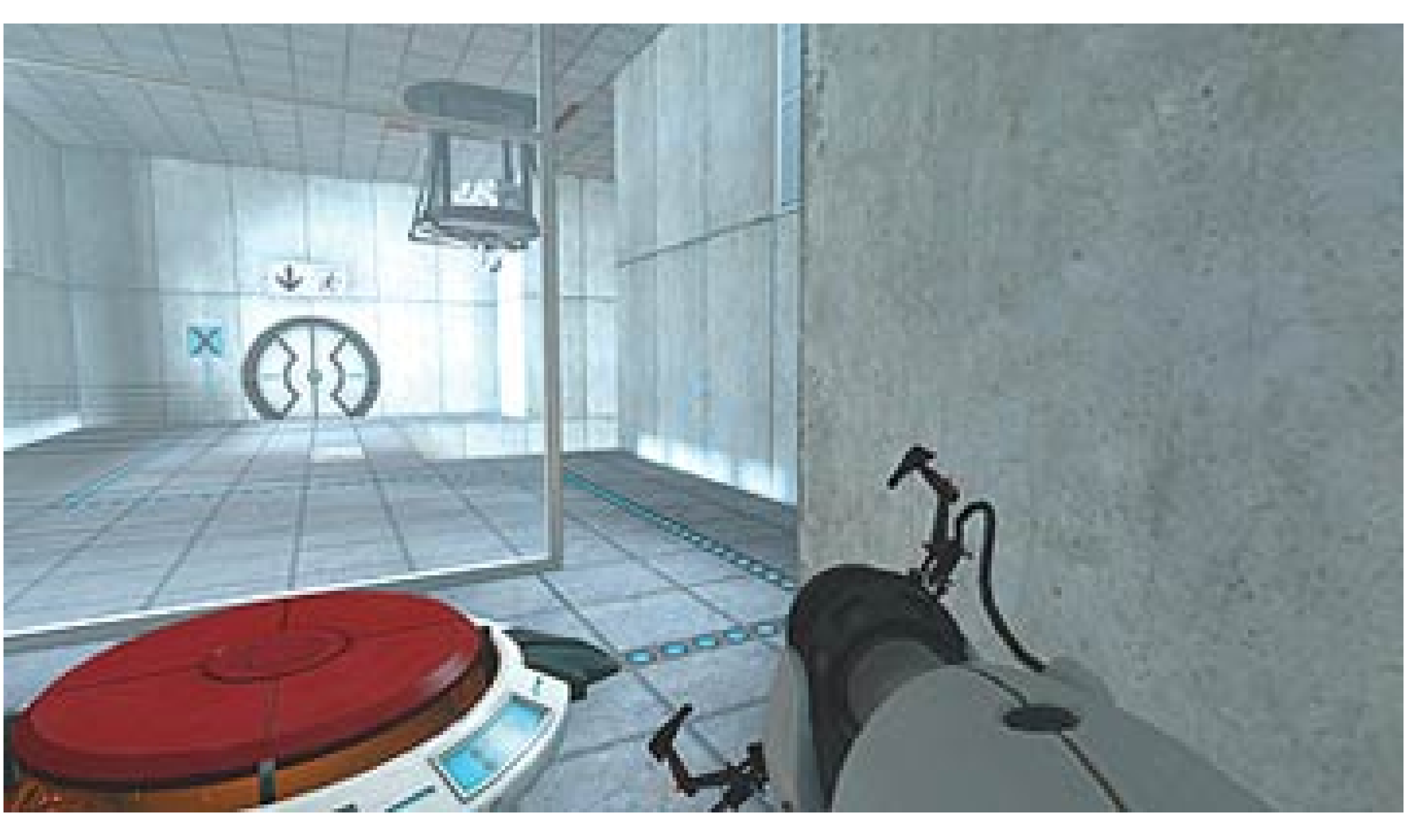
Upon emerging from the orange portal, you see another gap of similar size. This time, zap a blue portal at the far end of the gap, right next to the exit and walk back through the orange. Voilà! You've arrived at the exit! Now you're thinking with portal science.

Test Chambers

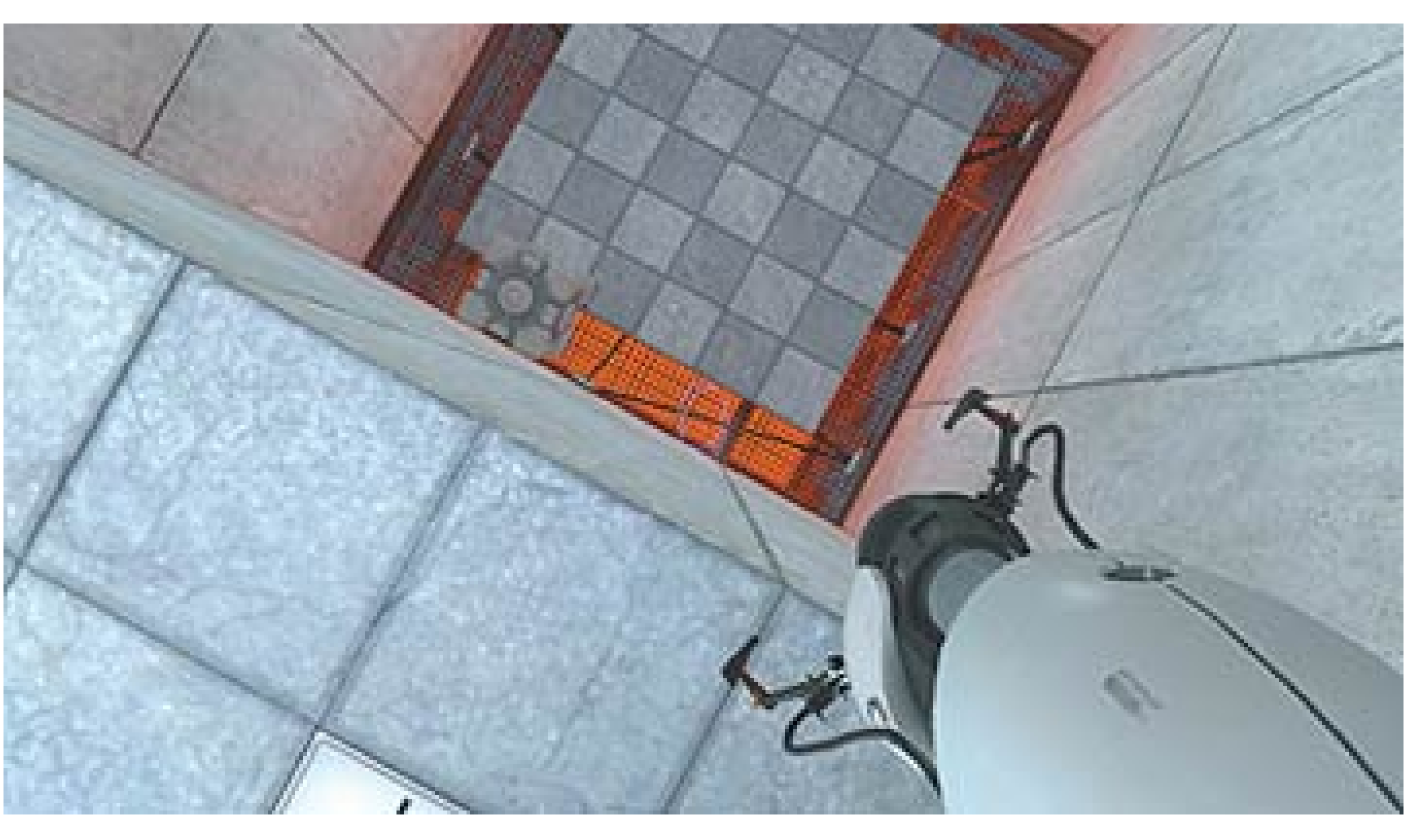
Chambers 04-05

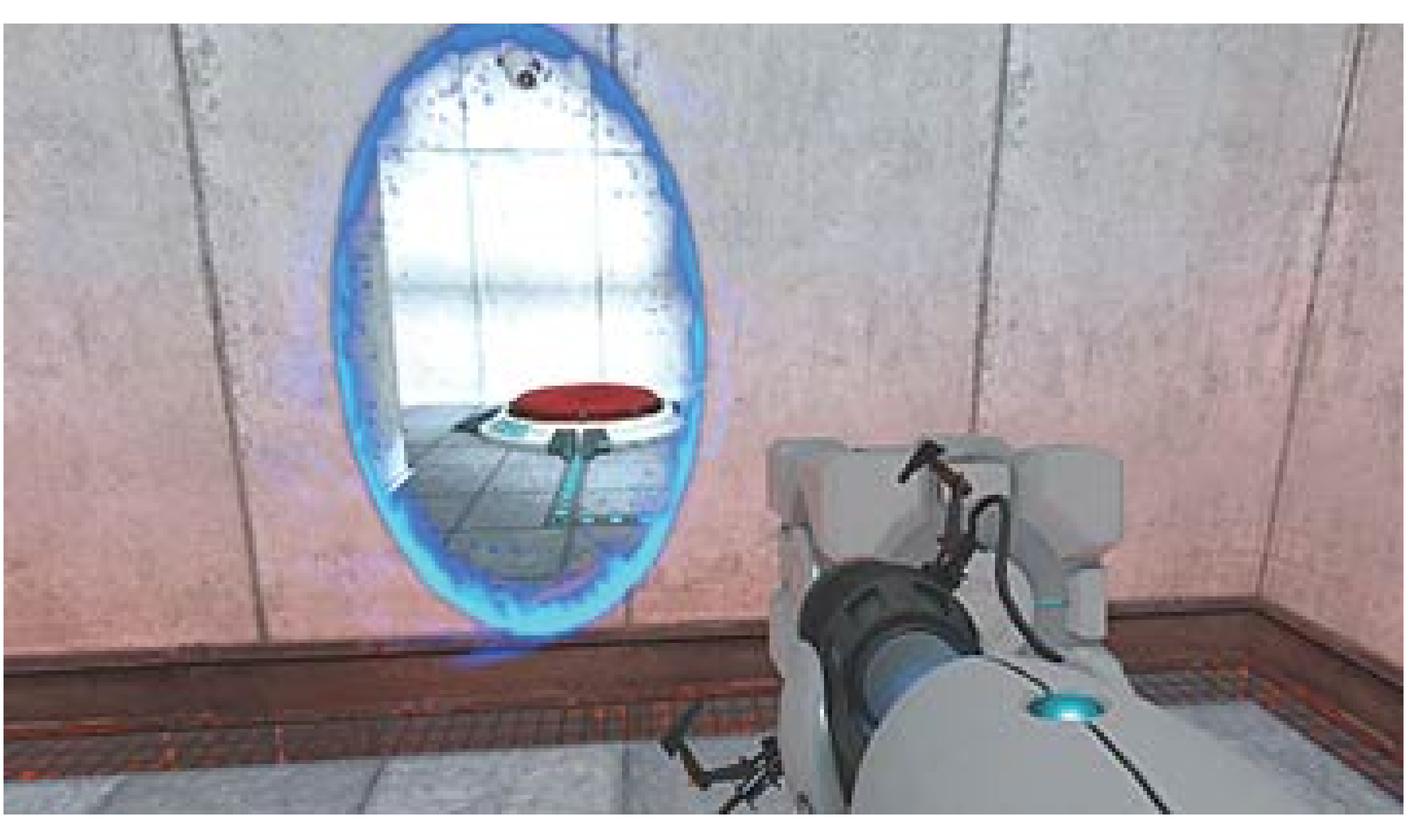


Map Legend
1.Test Chamber 04 Start Point
2.Test Chamber 04 End Point
3.Test Chamber 05 Start Point
4.Test Chamber 05 End Point

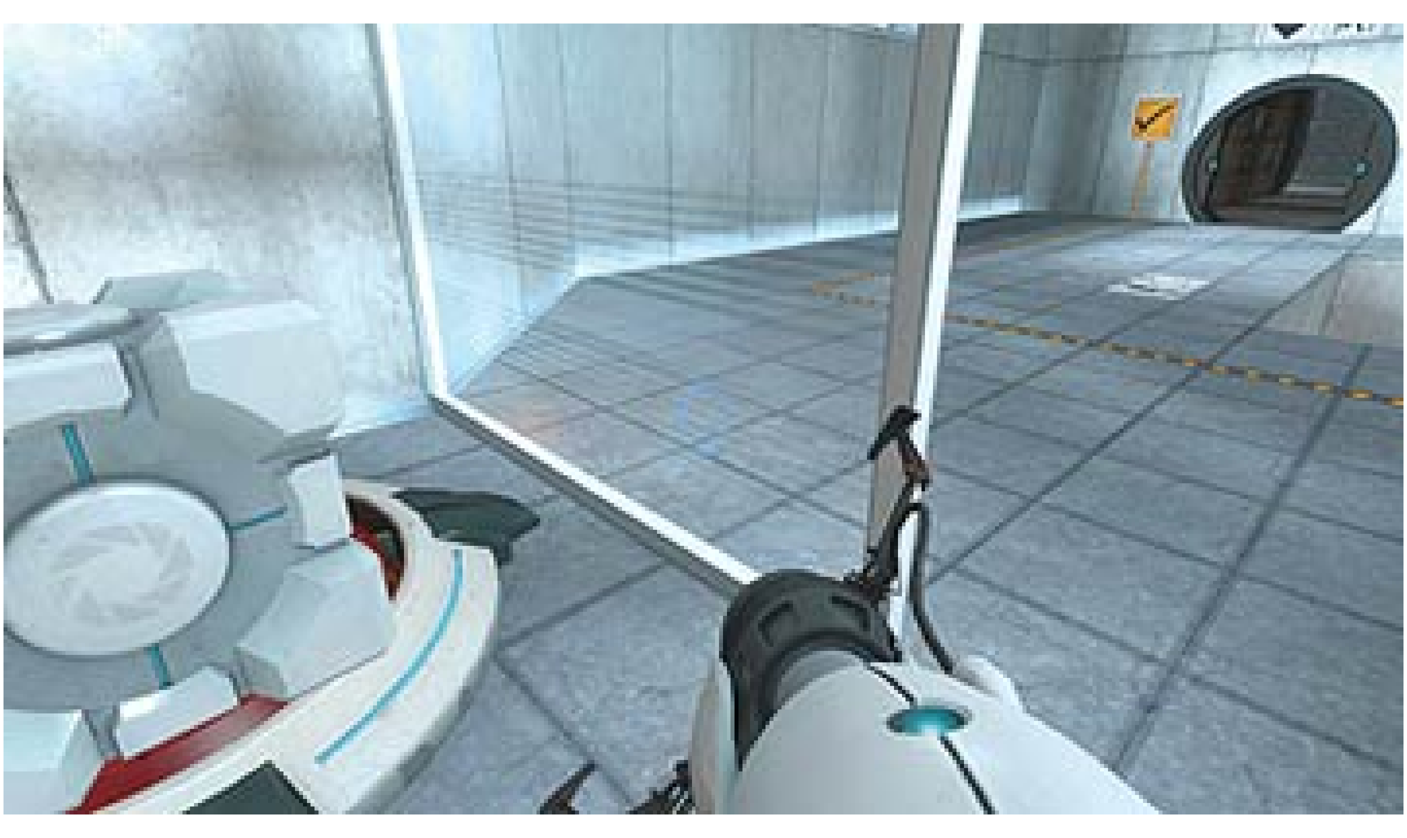


Walk past the red button after emerging from the elevator. You see a Vital Apparatus Vent suspended over a pit right ahead of you. Go there.





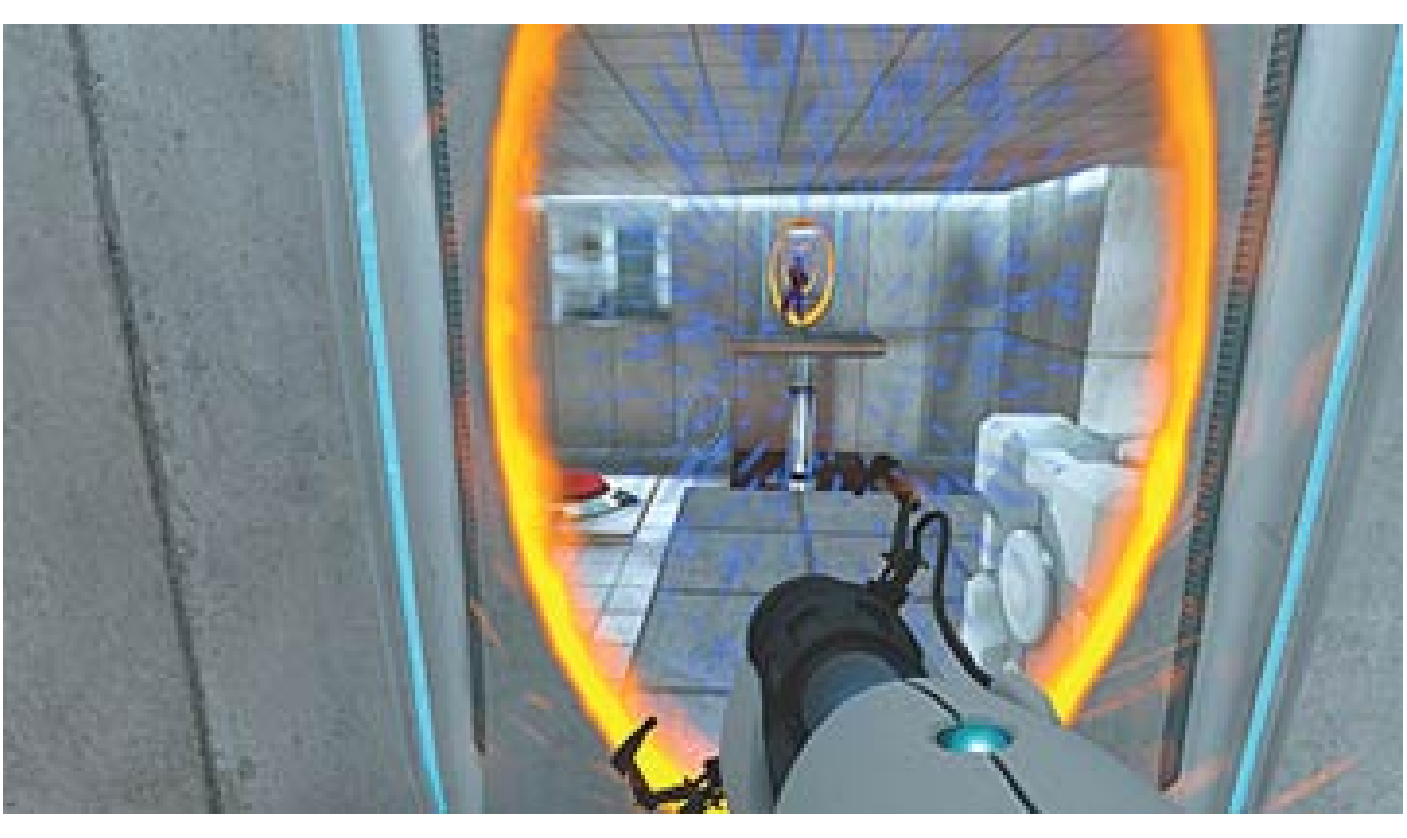
There's Weighted Storage Cube down in the pit, so hop into it, place a blue portal on the wall in front of you, and take the cube through it. You emerge through the orange portal that's adjacent to the button you passed on your way to the pit.

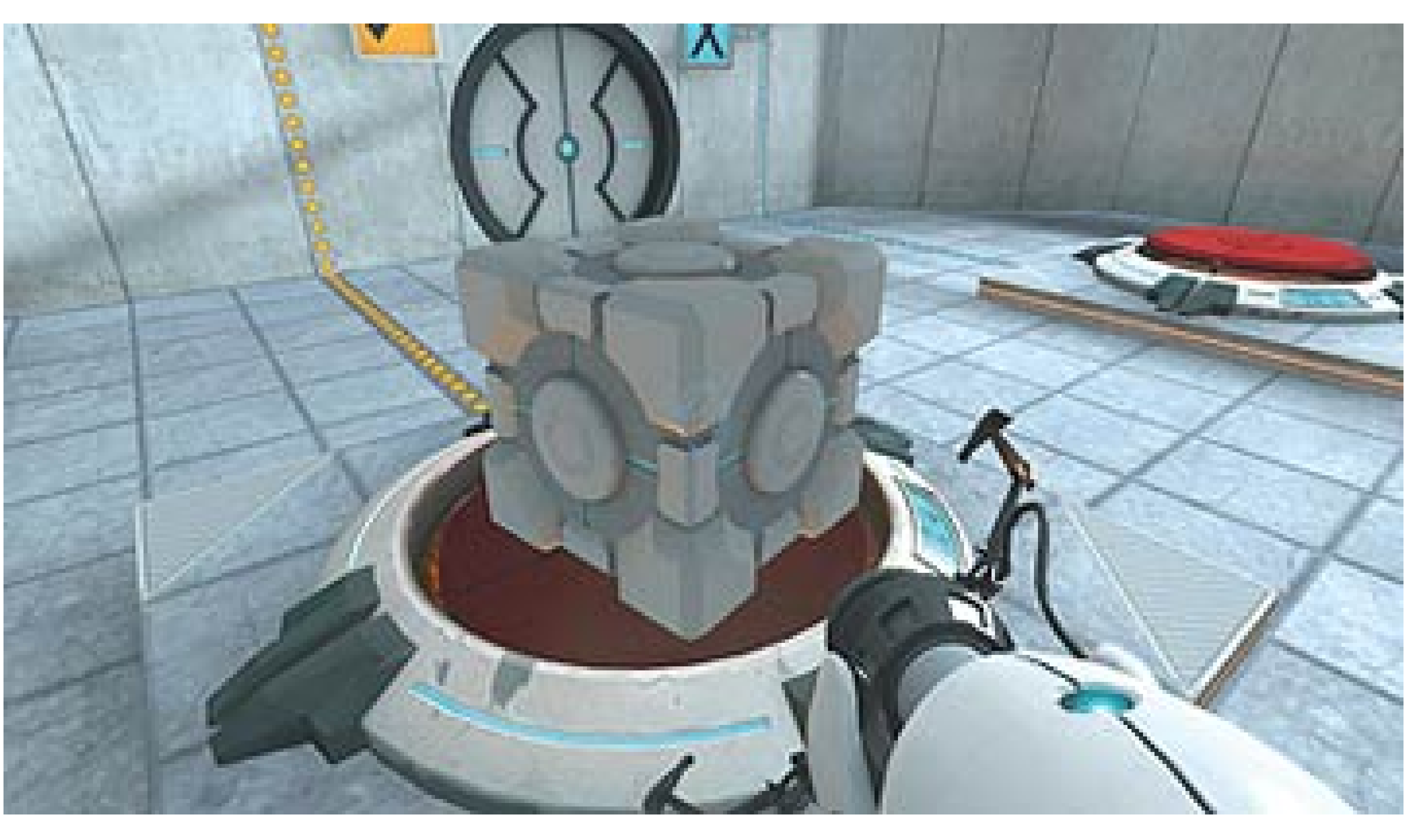


Place the cube on the button and proceed through the exit at the far end of the chamber. You've just solved Test Chamber 04.

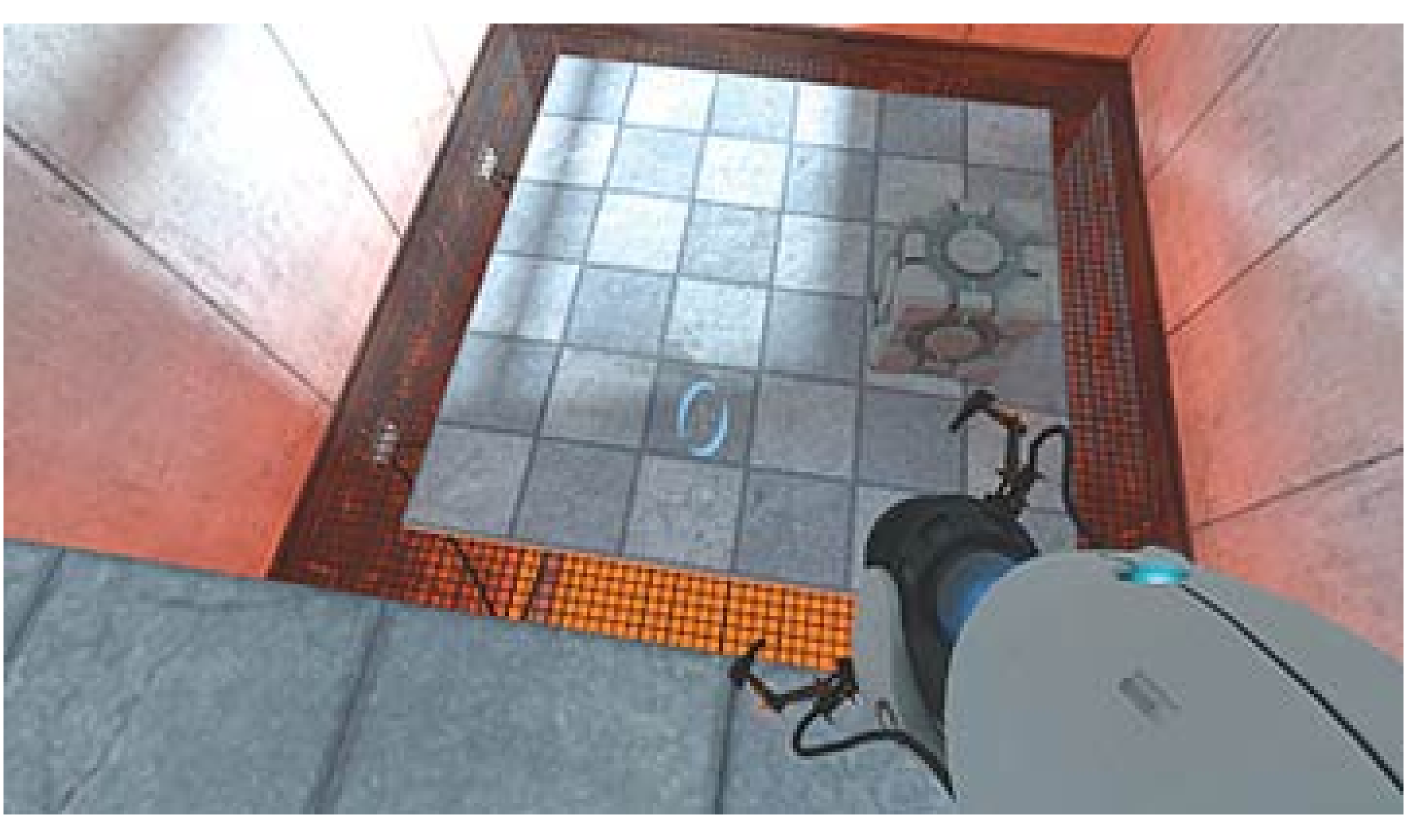
Test Chamber 05

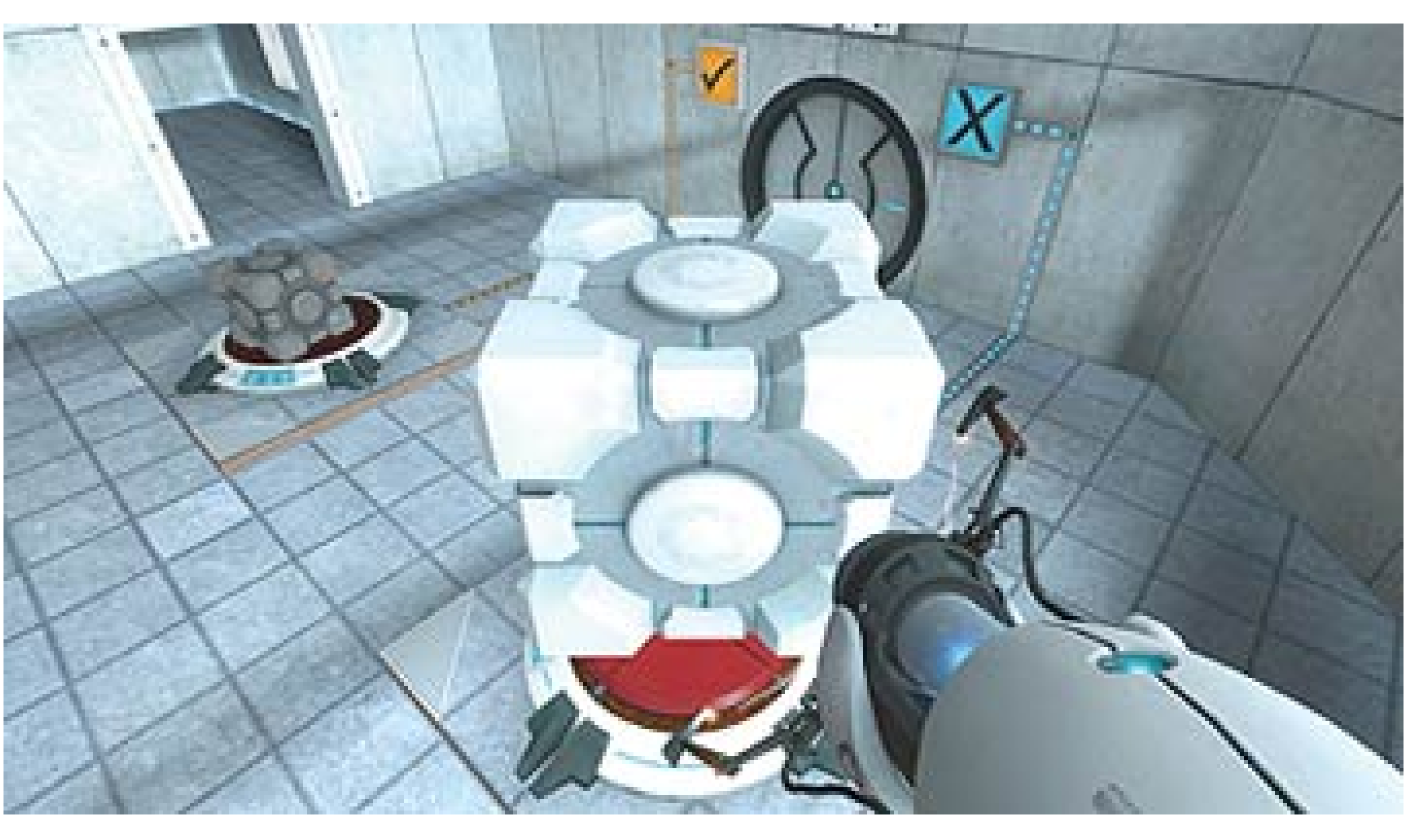
Stroll down the hall into Test Chamber 05's main room. You see two buttons on the ground and two elevated platforms: one with a Weighted Storage Cube on it, and another with a orange portal on the wall behind it. Create a blue portal anywhere that's accessible, and walk through it onto the orange portal's elevated platform. You emerge facing the platform with the cube on it.



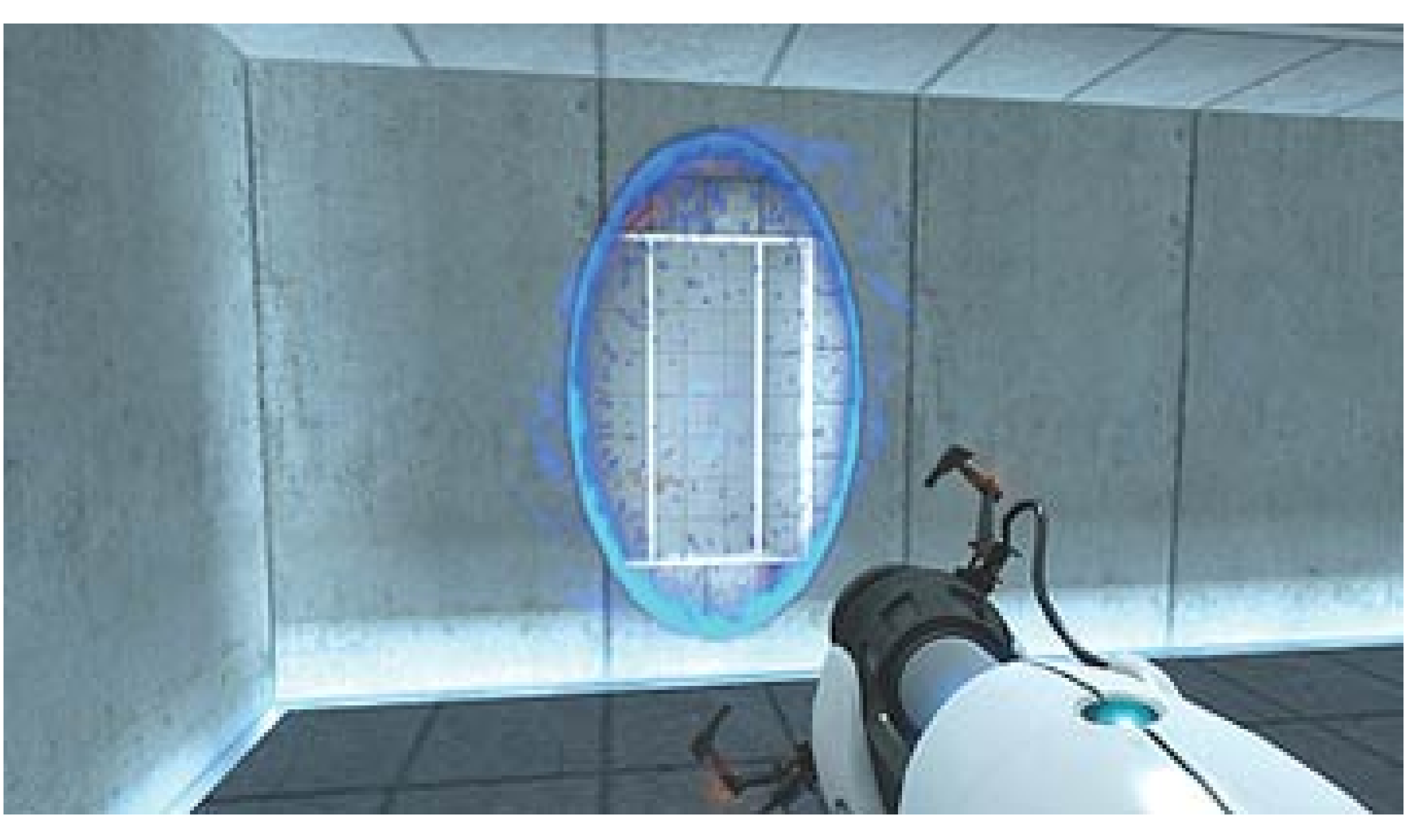


Fire a blue portal at the wall behind the cube-bearing platform. Walk through, pick up the cube, and drop down to the ground. Place the cube on one of the buttons.





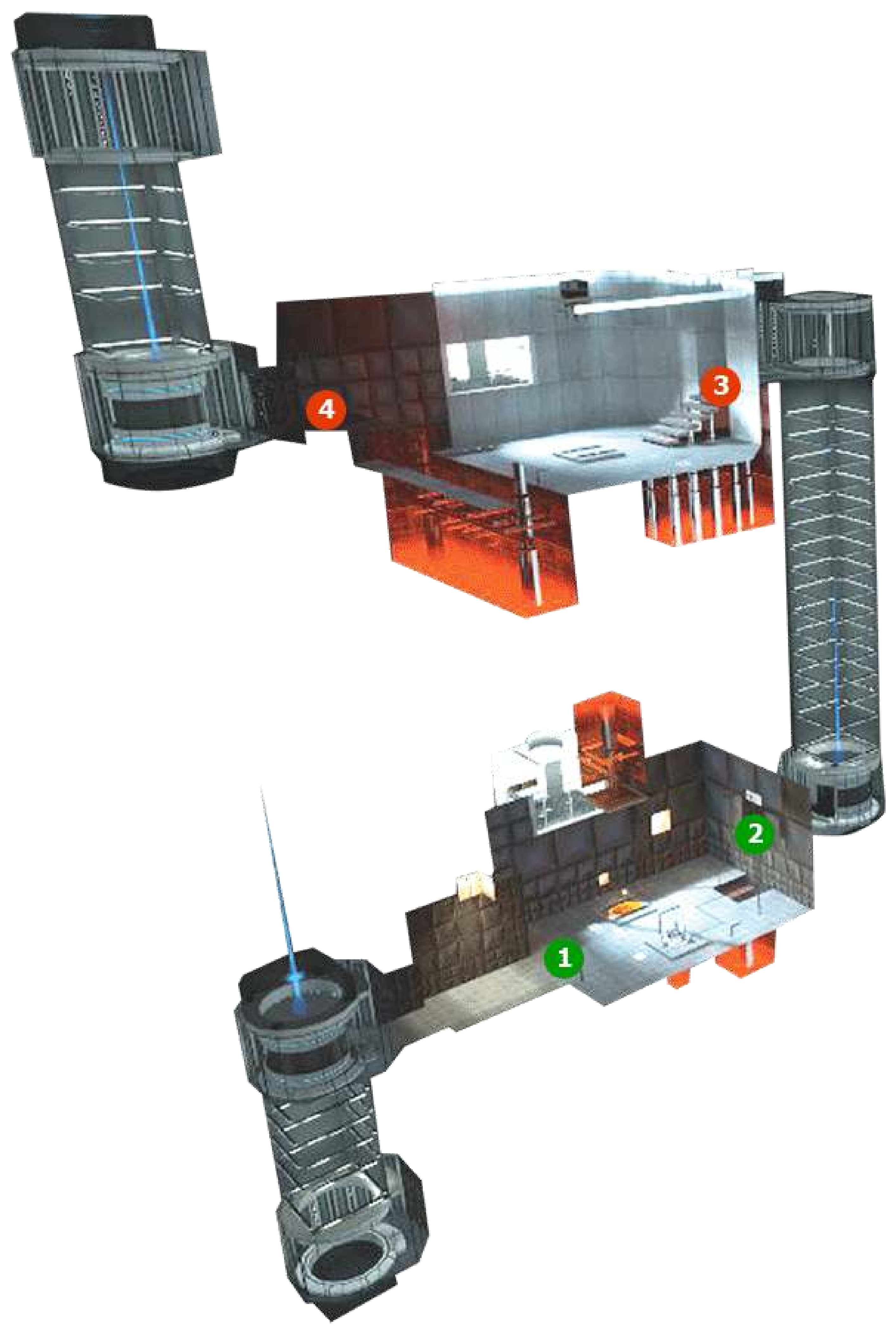
Drop into the pit that's directly opposite the sealed exit to this room. Fire a blue portal on a wall of your choosing, grab the cube that's in the pit, run back through your portal and off the elevated platform, and depress the second button. Proceed to the next room.



You notice an orange portal above the glass ceiling in this room. To reach it, place a blue portal anywhere you wish. Run through it, and you're done.

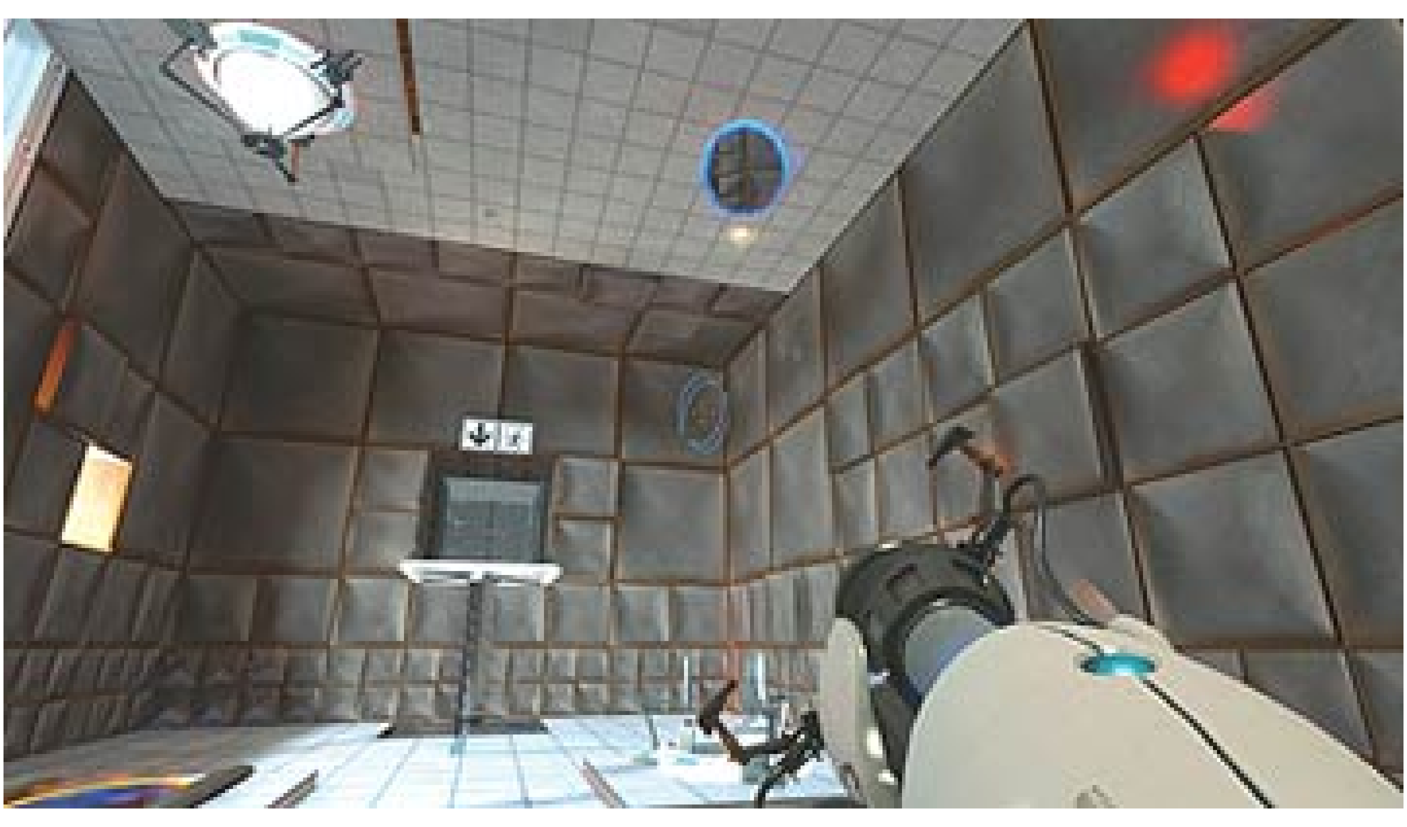
Test Chambers

Chambers 06-07

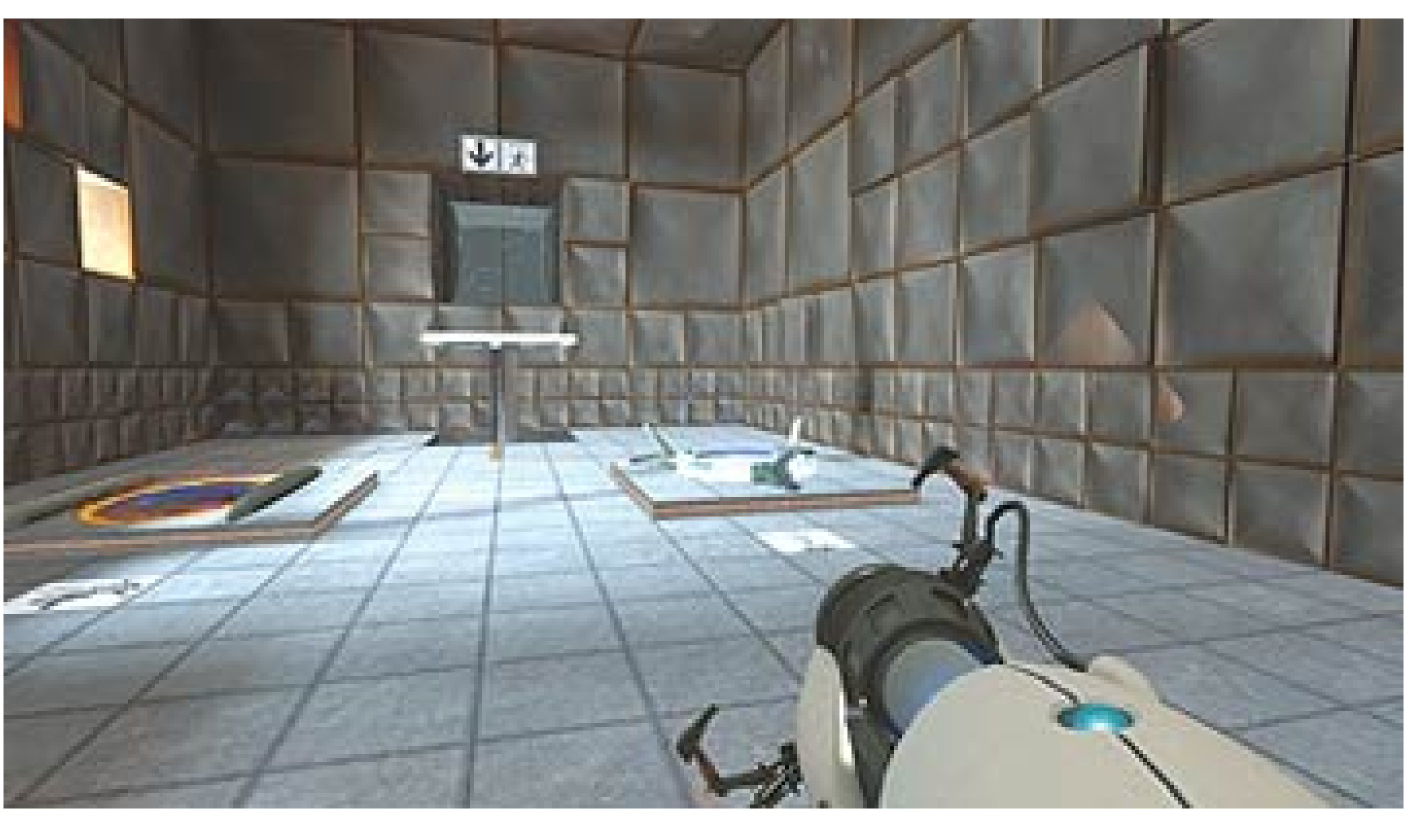


Map Legend
1.Test Chamber 06 Start Point
2.Test Chambr 06 End Point
3.Test Chamber 07 Start Point
4.Test Chamber 07 End Point

Test Chamber 06

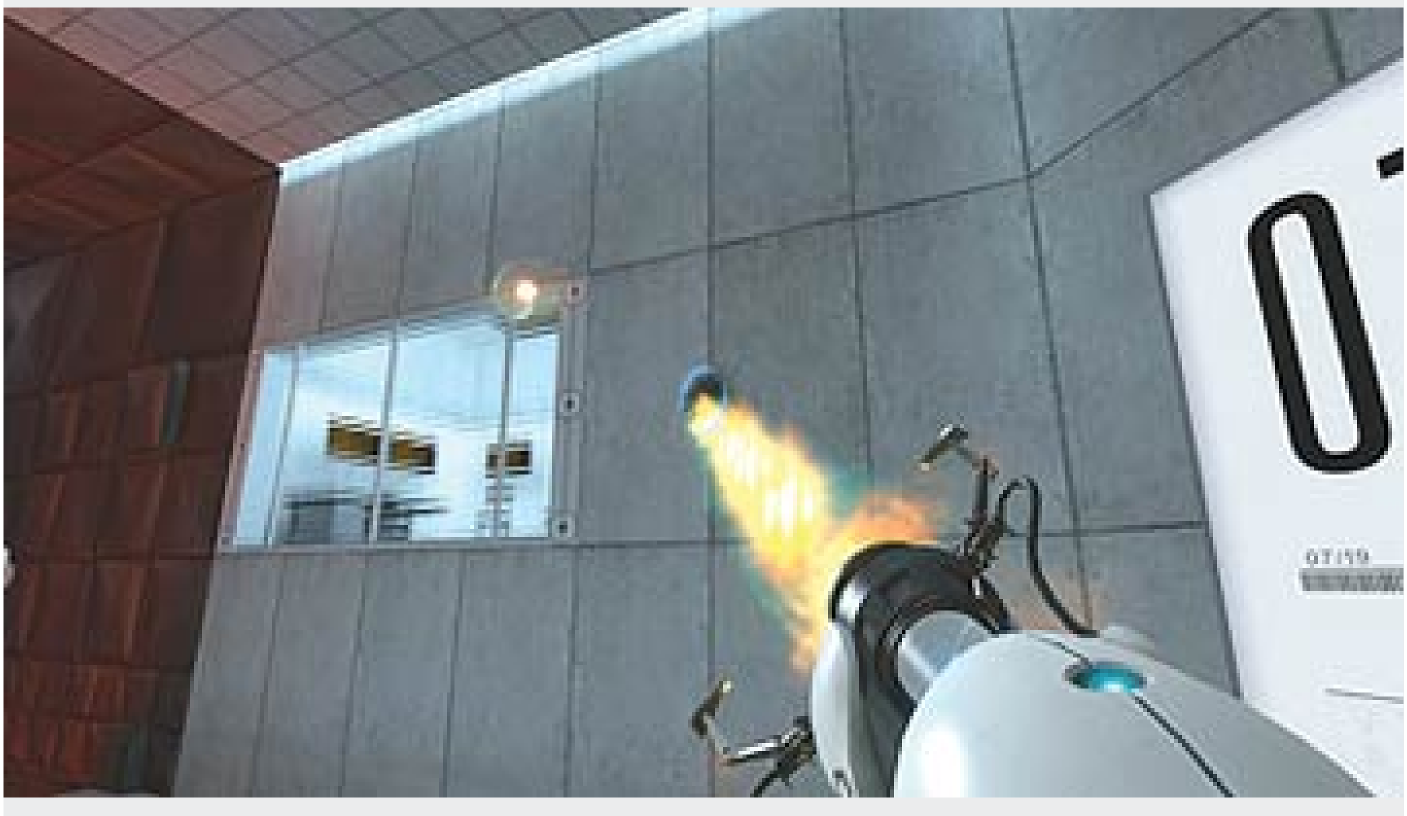


Two curious devices greet you as you enter Test Chamber 06: a Ball Launcher fixed to the ceiling on your left directly above an inactive orange portal, and a Ball Catcher sitting on the ground to your right.

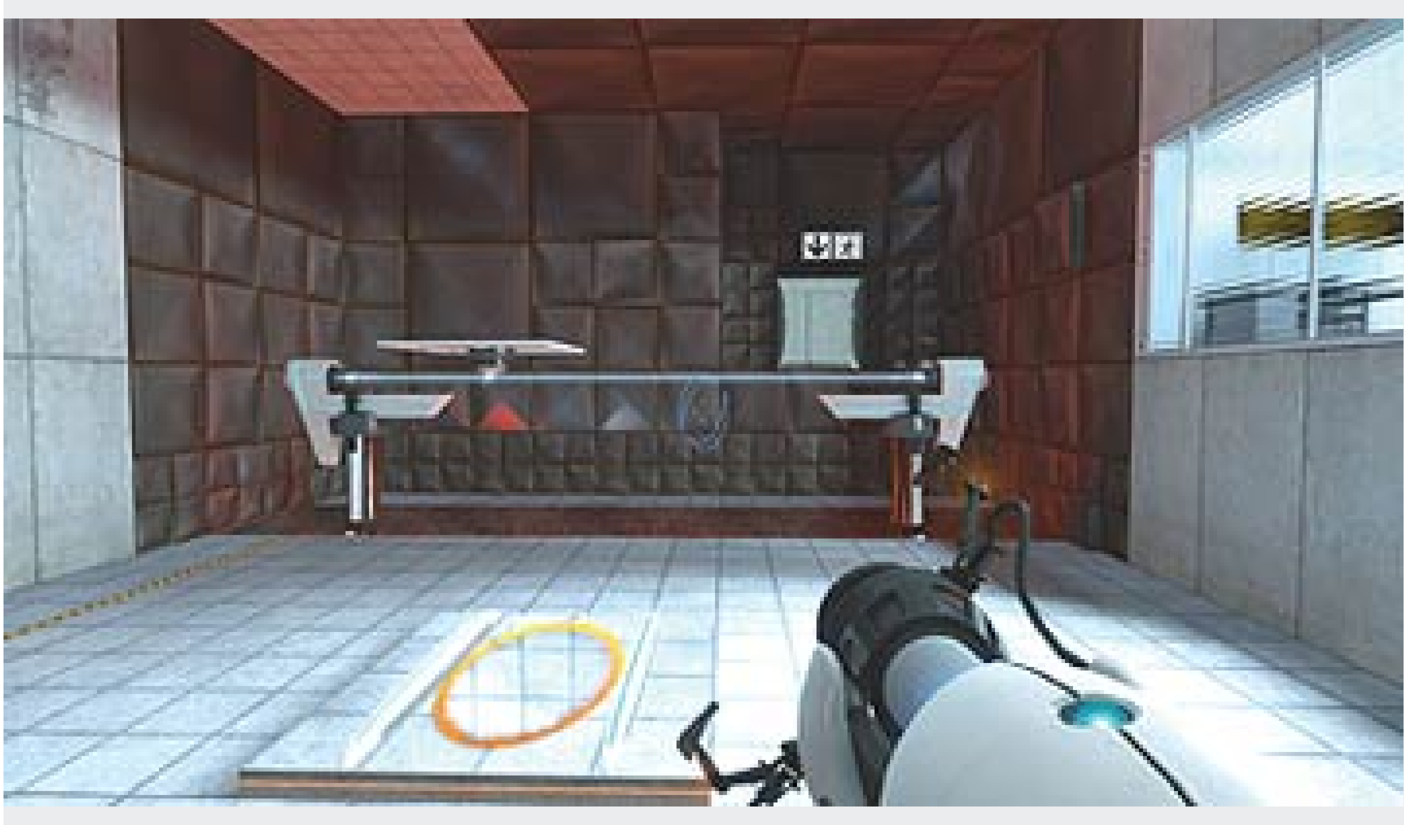


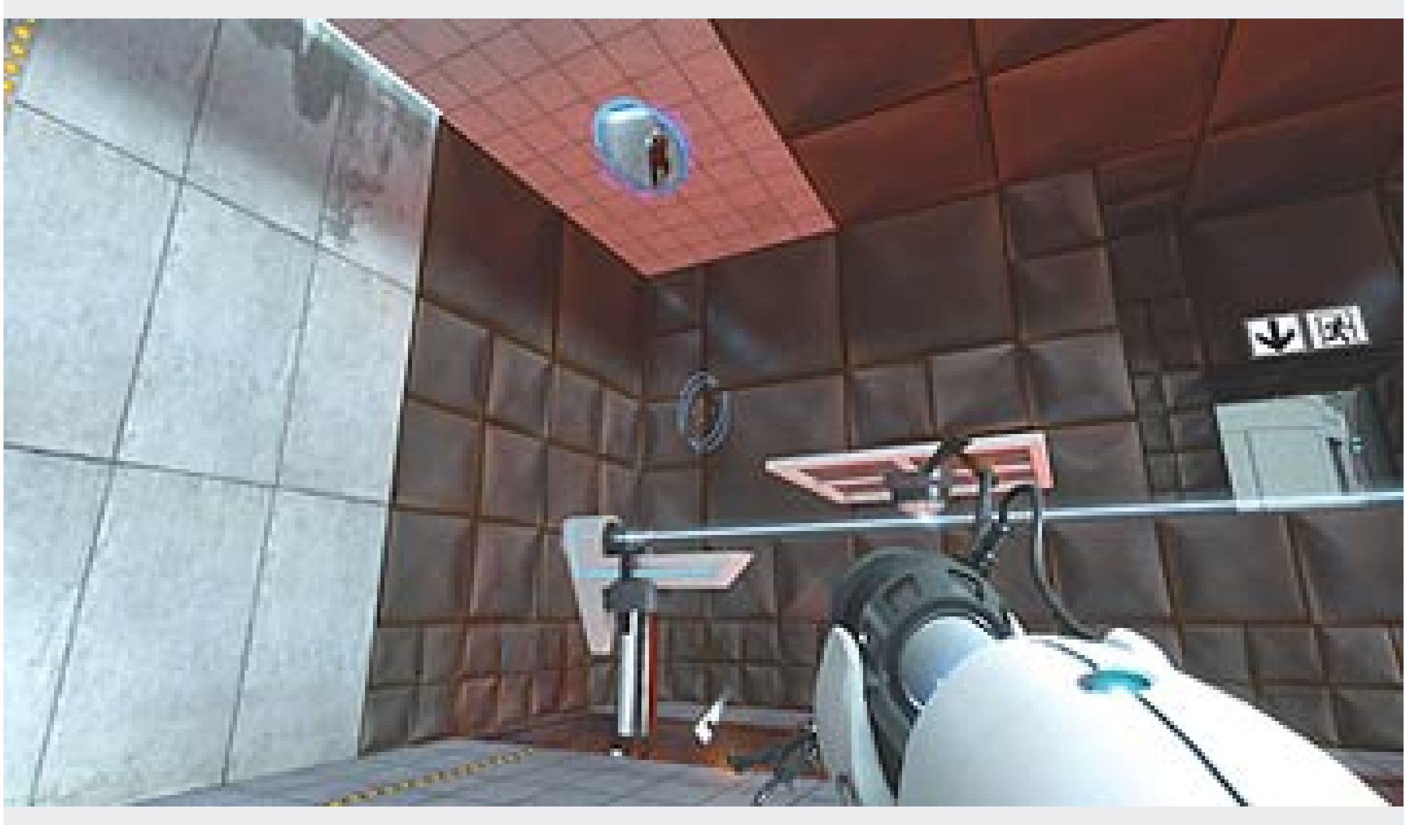
The point of this room is to get the energy ball that the Launcher emits to make contact with the Catcher. To do this, fire a blue portal directly above the Catcher; the Launcher's ball travels through the orange, out of the blue, and into the Catcher's mechanical mitts. After doing so, move to the lift that you just activated, and proceed through the grid to the exit.

Test Chamber 07

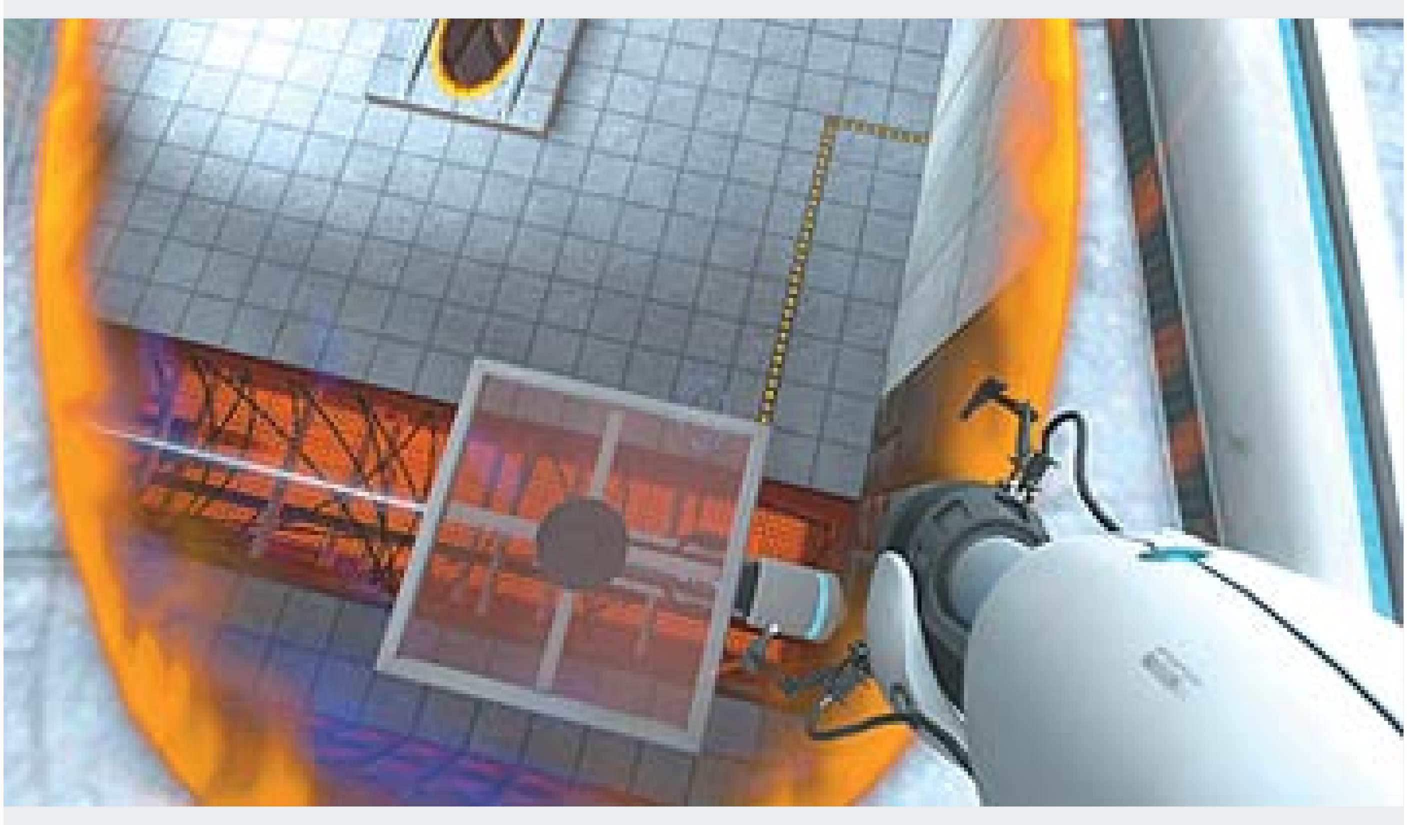


You encounter yet another Launcher and Catcher set when you enter Test Chamber 07. There's an orange portal directly beneath the ceiling-mounted Catcher. To get the ball into its maws, simply fire a blue portal on the wall to your right. The rebounding energy ball has thoughtfully charred the wall with the exact position it makes contact, so aim there.



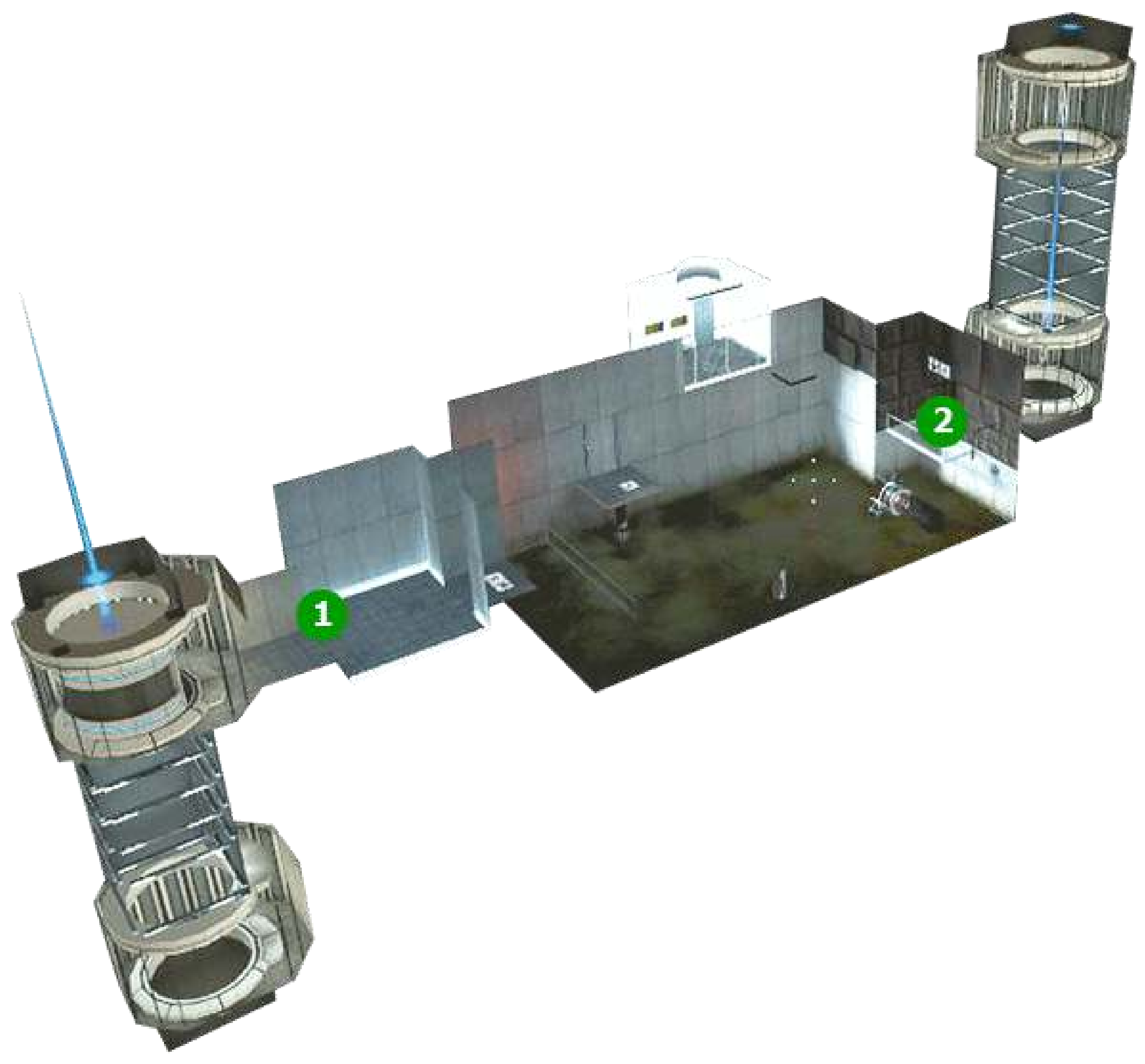


You've just activated the horizontal lift at the far end of the chamber. Deploy a blue portal directly above its starting position and wait till the lift returns. When you can peek through the orange portal on the ground and see the lift directly beneath you, jump through. Hop off it and onto the

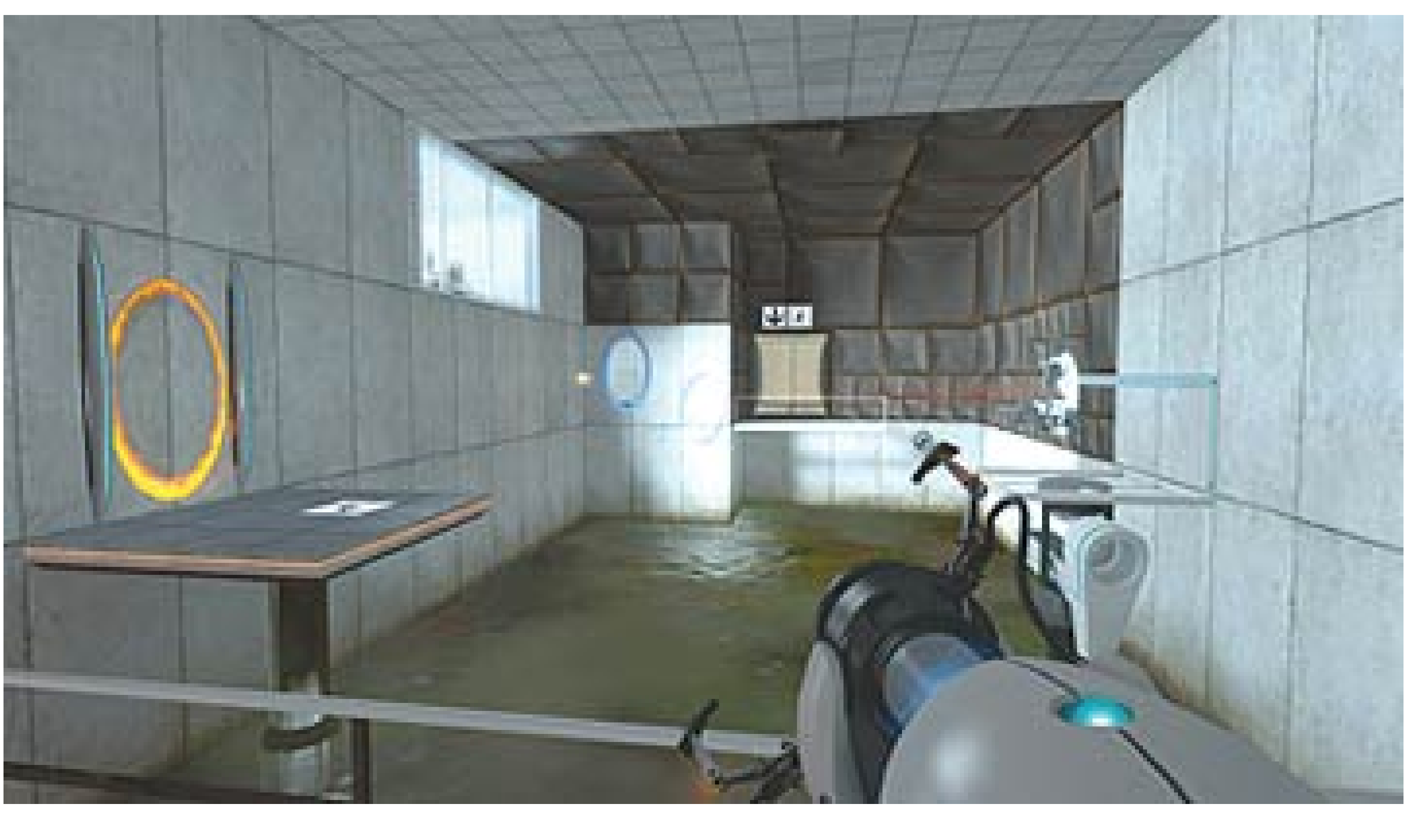


Test Chambers

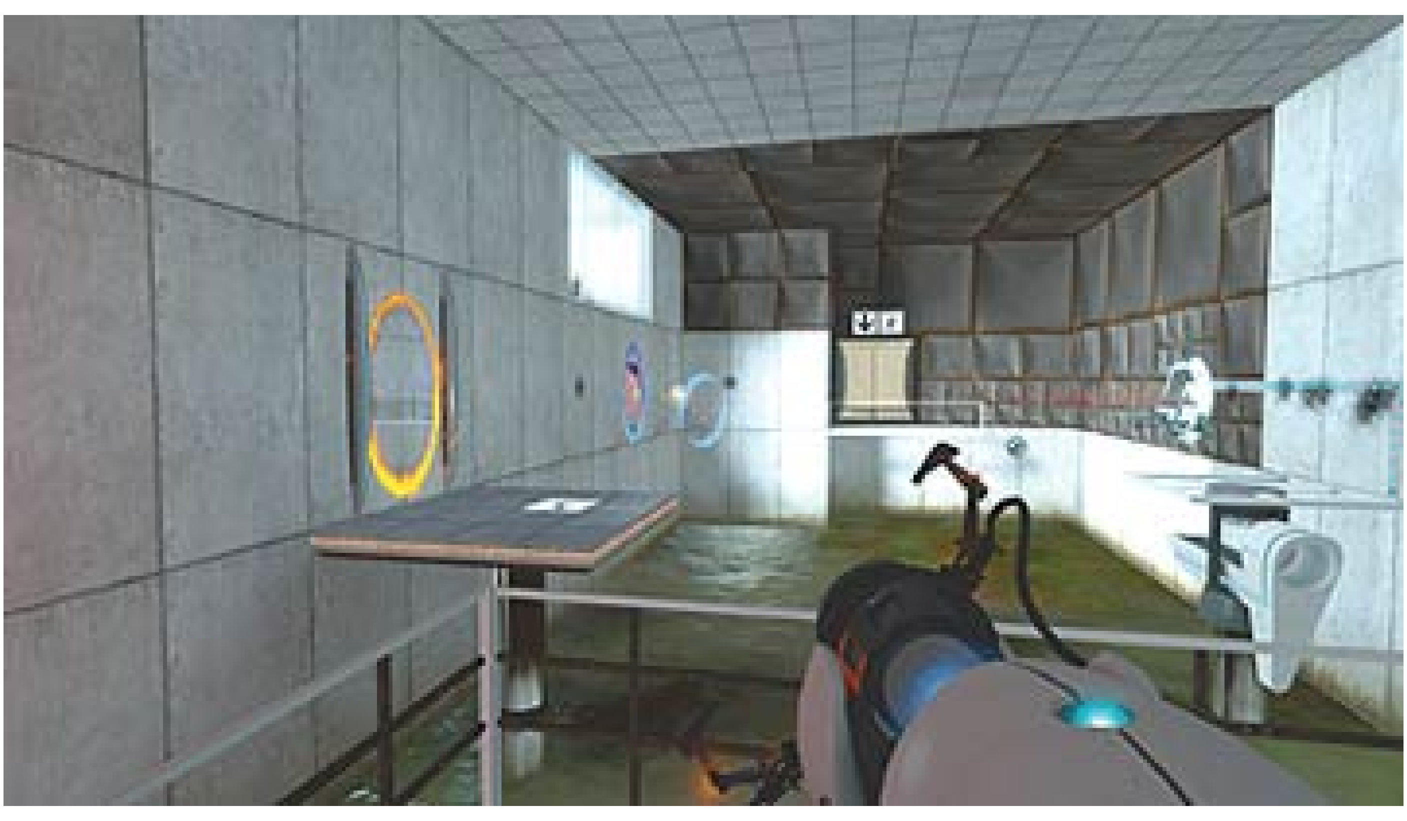
Chamber 08



Map Legend
1. Test Chamber 08 Start Point
2.Test Chamber 08 End Point

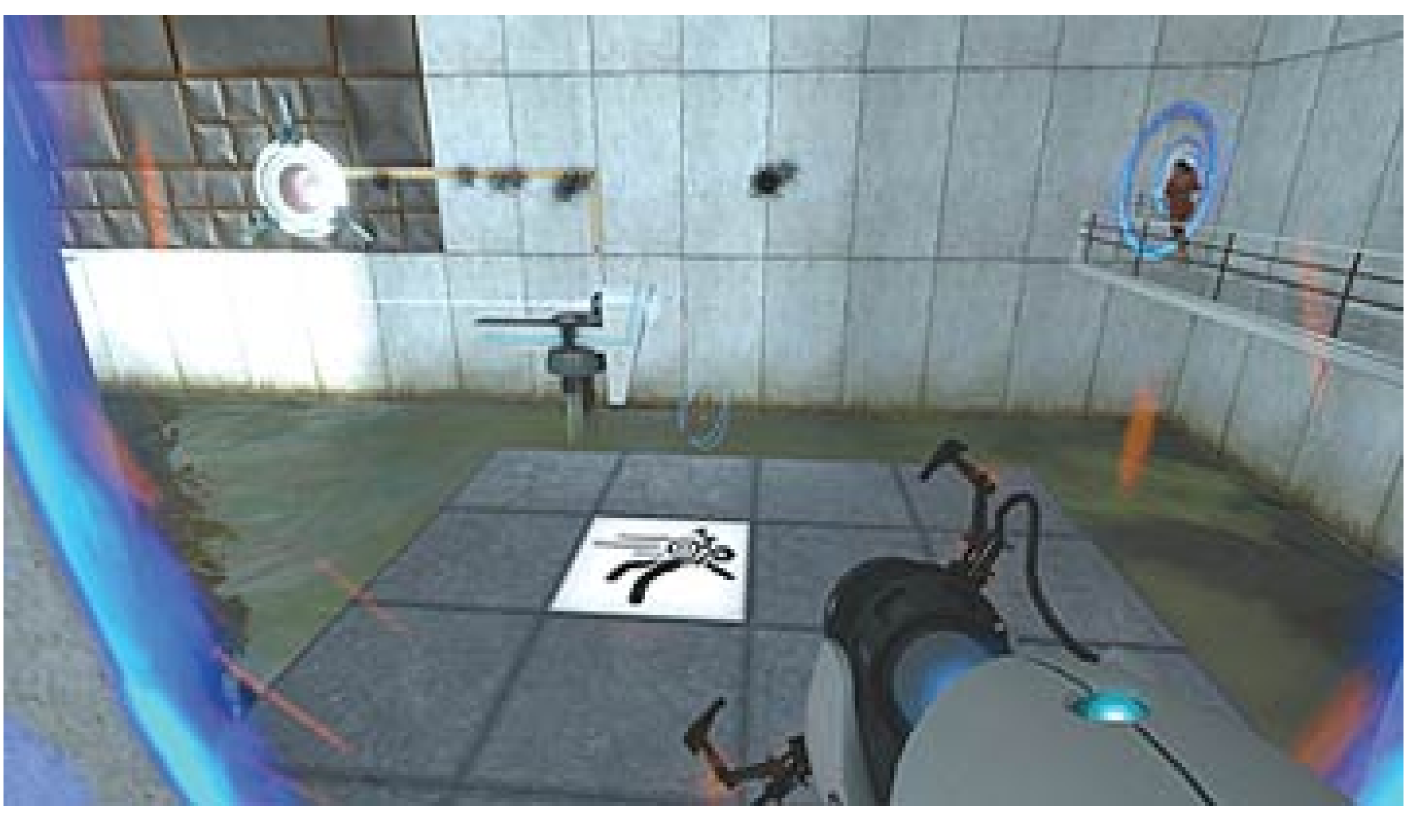


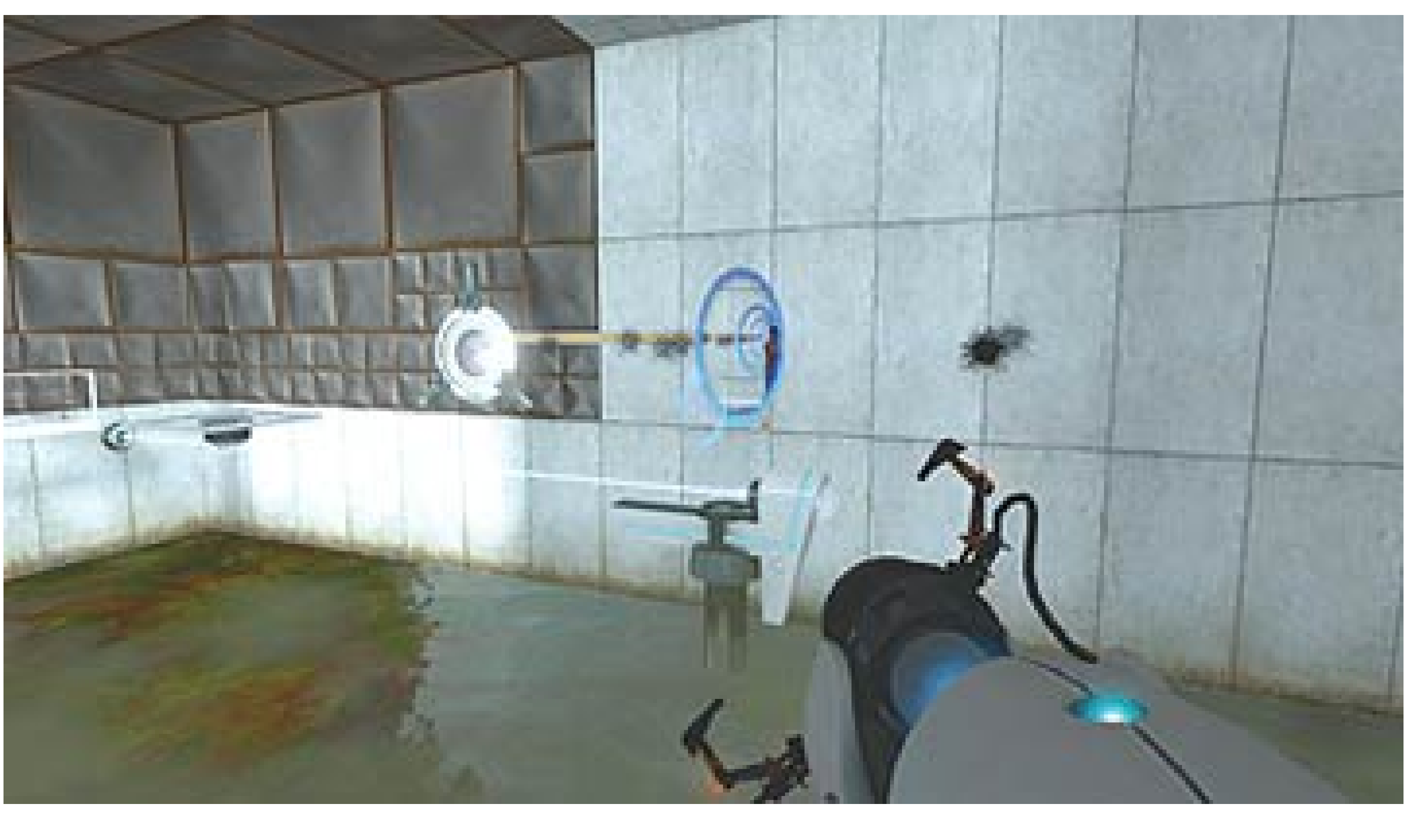
You see a Ball Launcher to your left aimed at the far wall of the room when you enter Test Chamber 08. Your job is to coax the energy ball it emits toward the Catcher that's fixed midway along the long wall to your right. First, fire a blue portal toward the point on the far wall where the energy ball makes contact—note the charred spot. After it comes out of the orange portal to your left, place a blue portal on the left wall directly in front of the Catcher. The ball rebounds off the spot where the original blue portal was, flies into the orange, then out of the new blue portal into the Catcher. You have just activated the horizontal lift along the right wall.



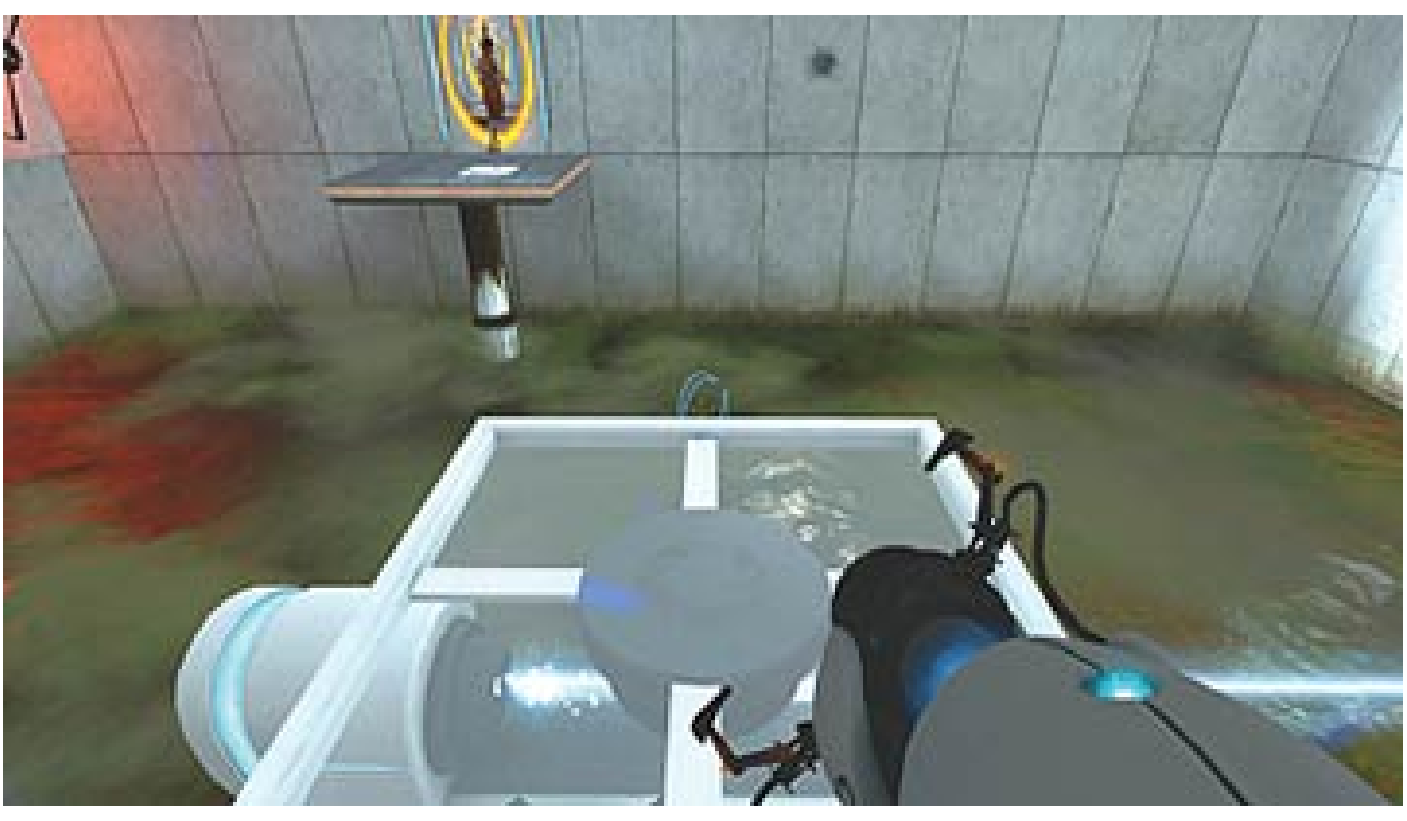
Caution

See all that goo on the ground? Try your best to avoid it—the goo is highly toxic and it kills you on contact. You're relatively safe in Test Chamber 08 (as long as you're careful getting on the lift), but you won't have that luxury elsewhere.



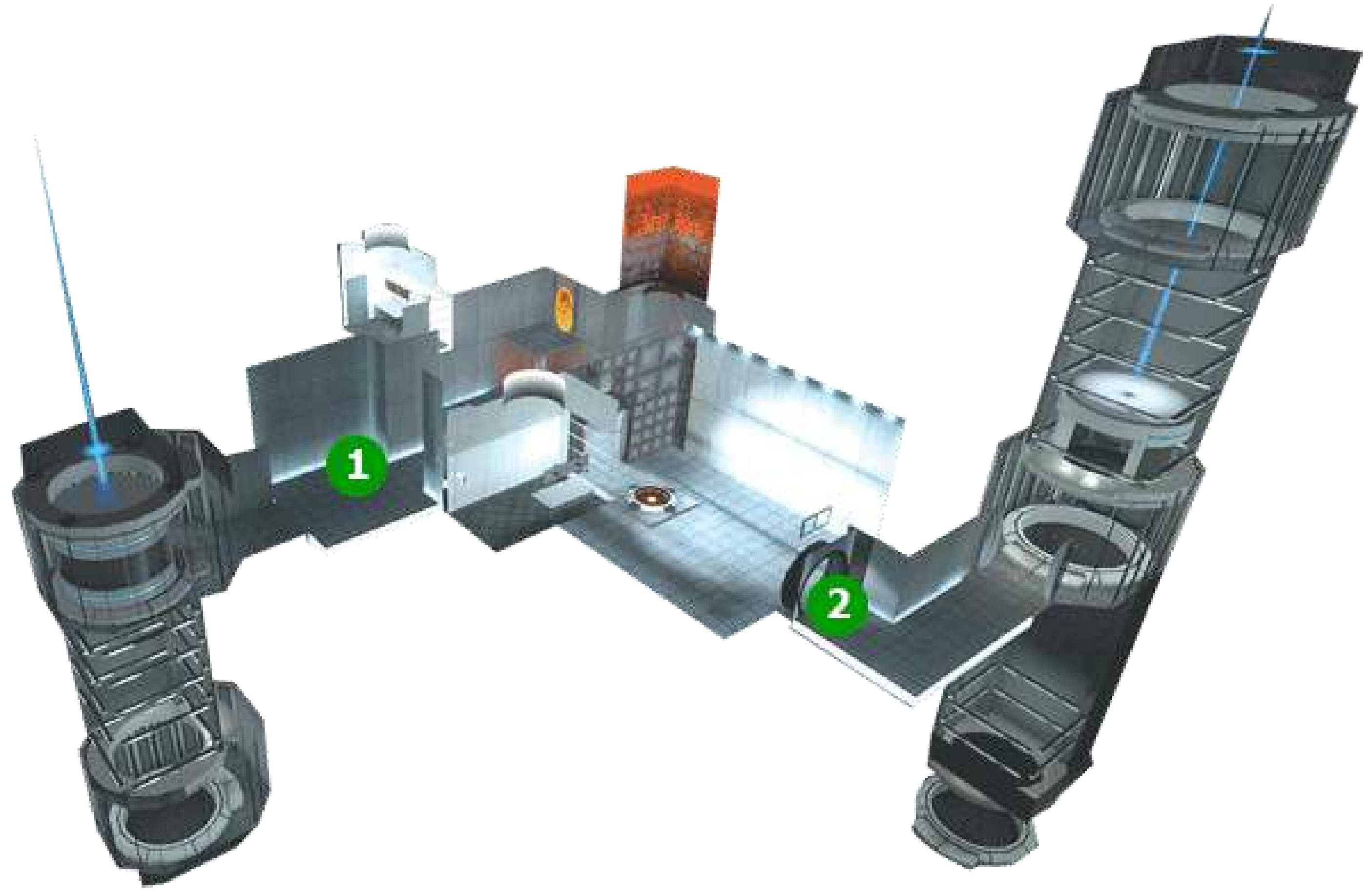


Now fire a blue portal anywhere that is accessible. Walk through it and onto the elevated platform in front of the orange portal. From here, deploy a blue portal at the lift's start point. When it arrives, back out through the orange portal and ride the lift to the exit.

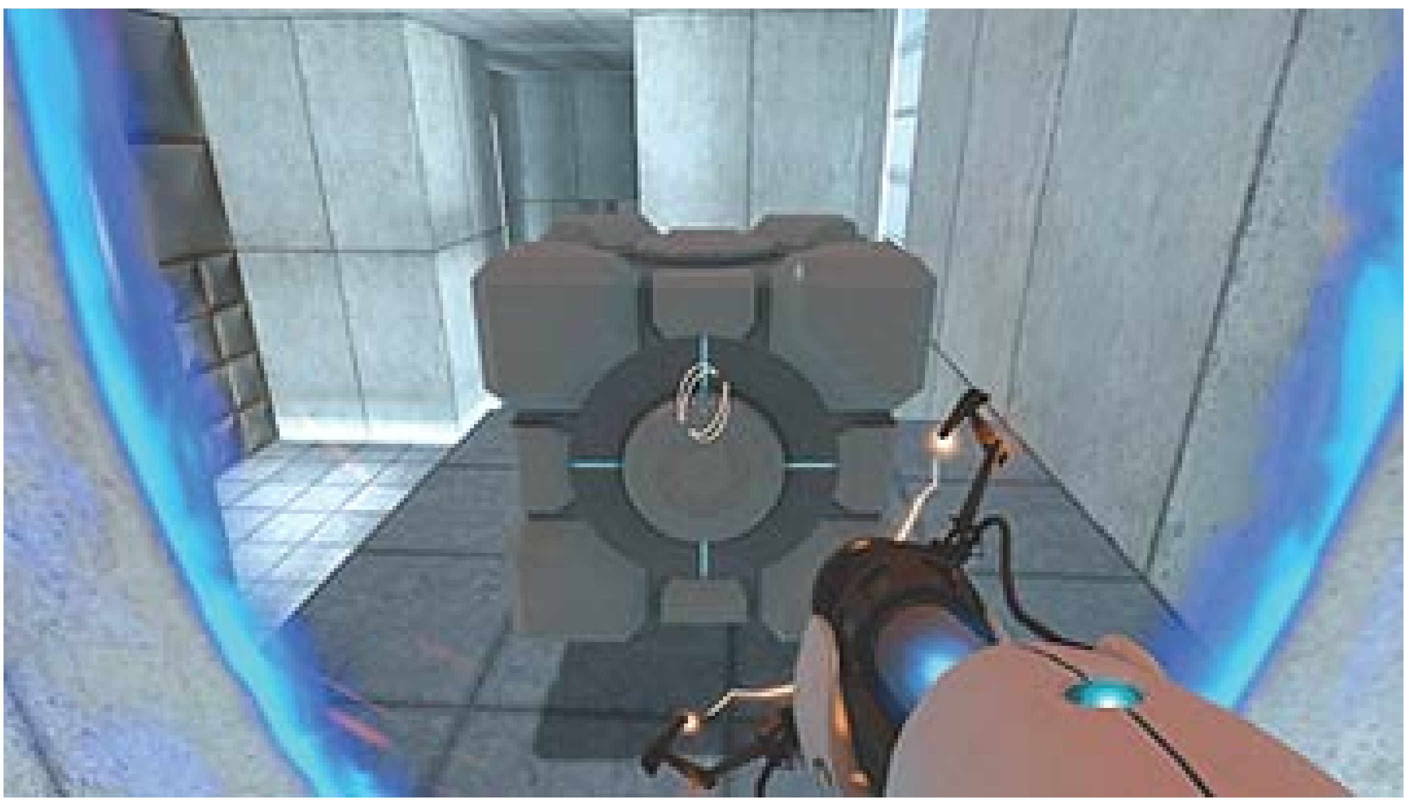


Test Chambers

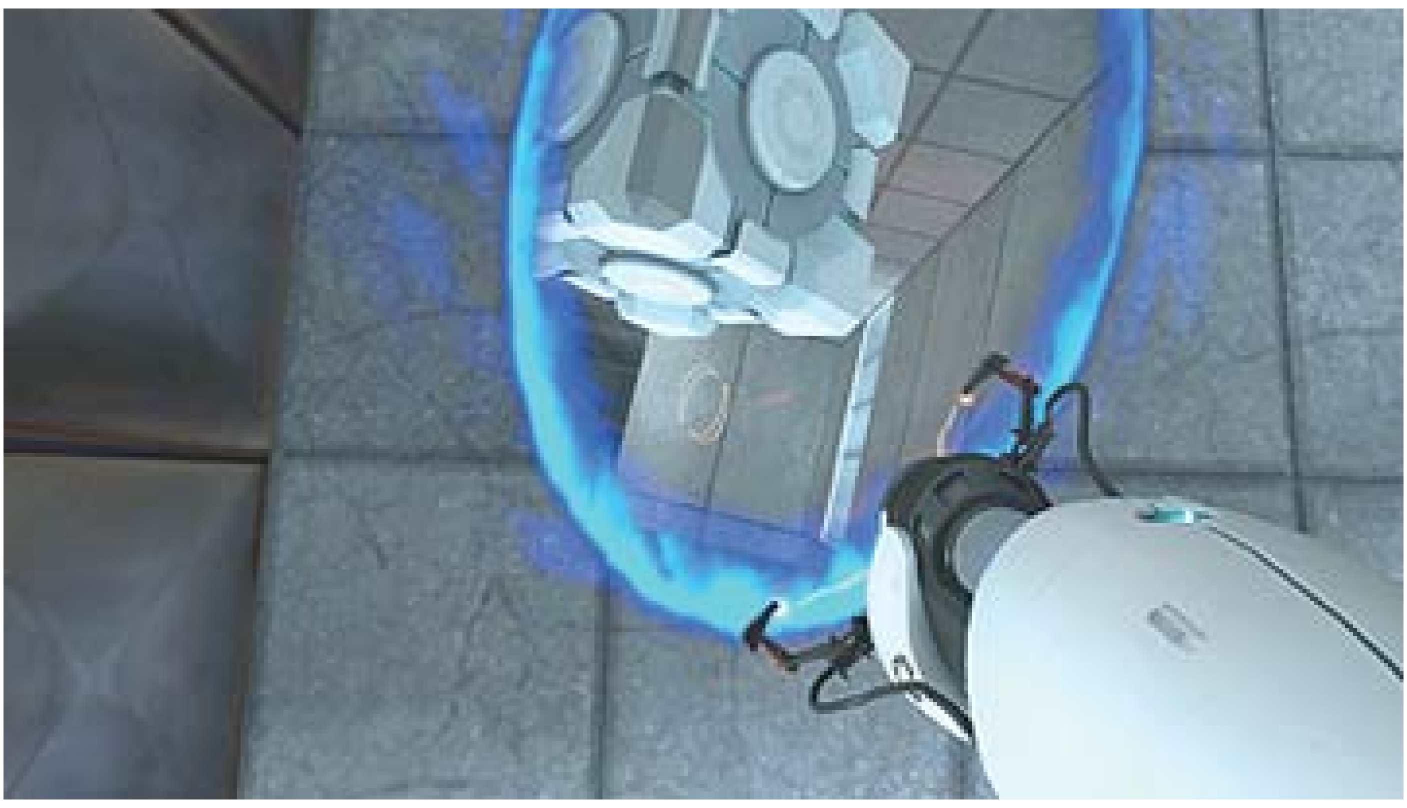
Chamber 09



Map Legend
1.Test Chamber 09 Start Point
2.Test Chamber 09 End Point



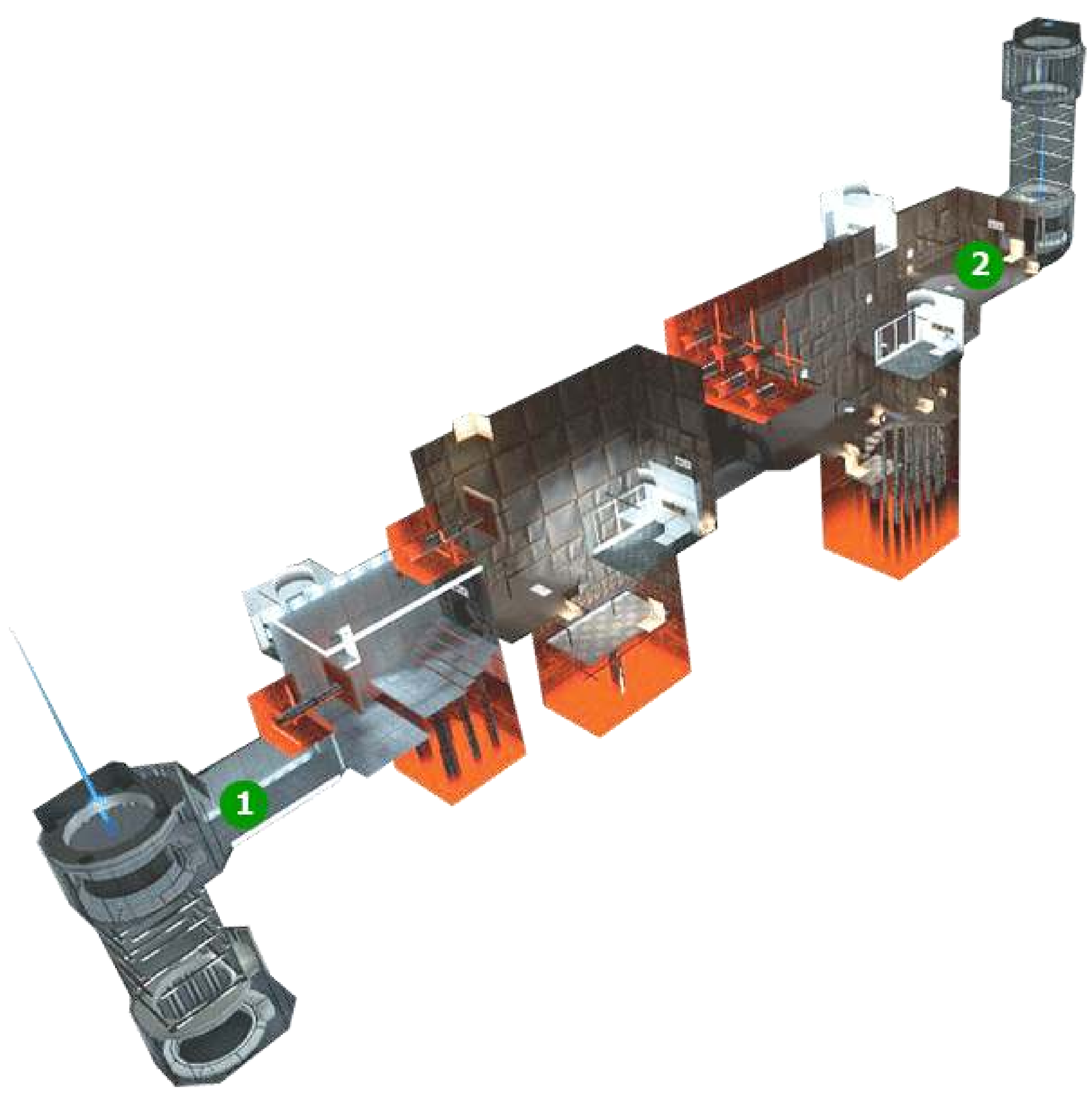
Pay no mind to GLaDOS's assurances about this test being unsolvable—"she" is just trying to fulfill the psychological portion of Test Chamber 09's exercise. You have to get creative, however, since you can't simply bring the Weighted Storage Cube through the Material Emancipation Grid without disintegrating it. Likewise, if you place a portal behind the grid and walk back into the main room, your portal will disappear. Here's how you meet the challenge: First, fire a blue portal directly below the Vital Apparatus Vent. Pick up the cube that's on the ground and bring it through the portal. You've just emerged from the orange portal atop the elevated platform to your left. Leave the cube near the orange portal—you're going to have to reach in and grab it momentarily.



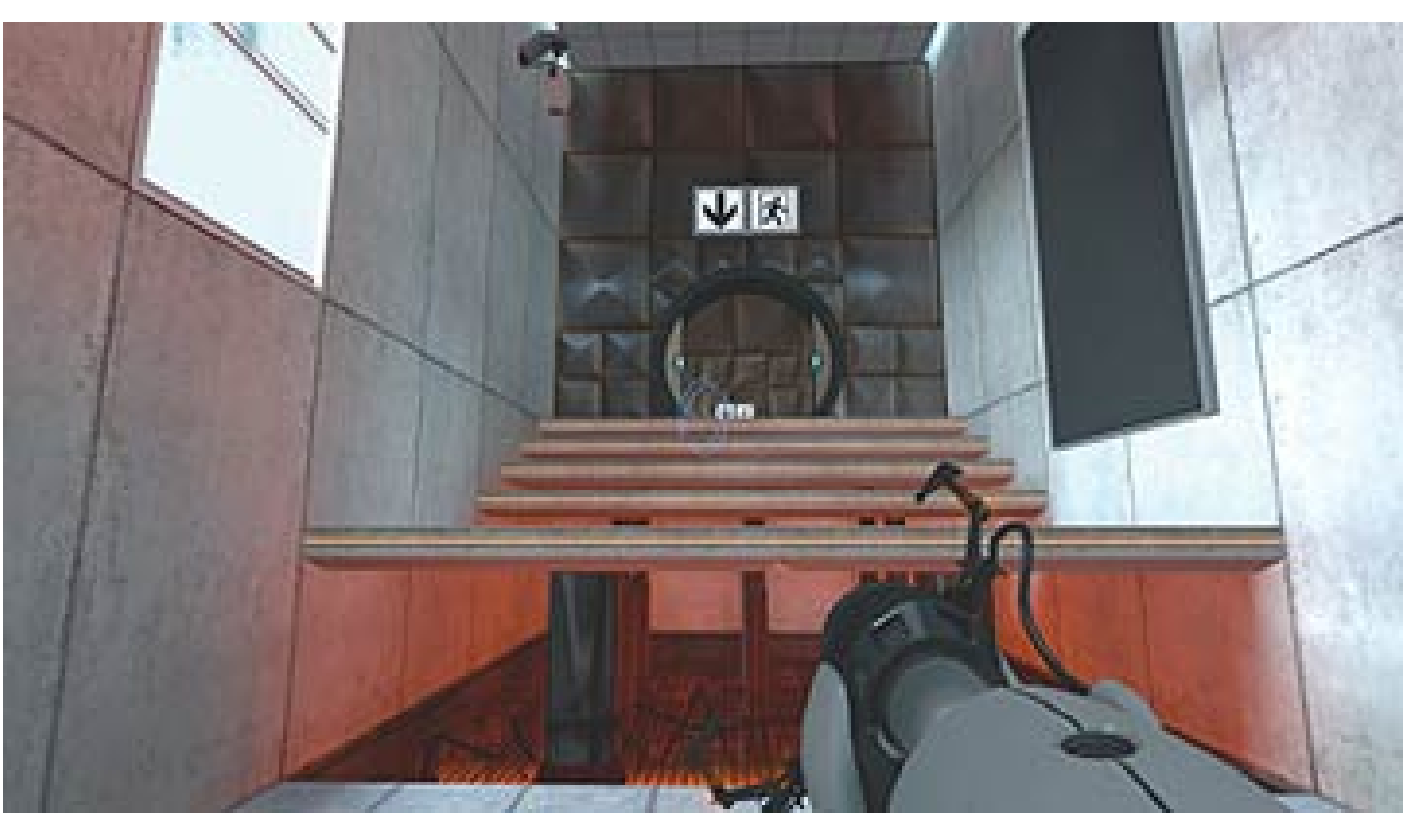
Now walk through the grid, deploy another blue portal, and grab the cube. You have officially foiled Aperture Science's Material Emancipation Grid technology. Place the cube on the button and exit the chamber.

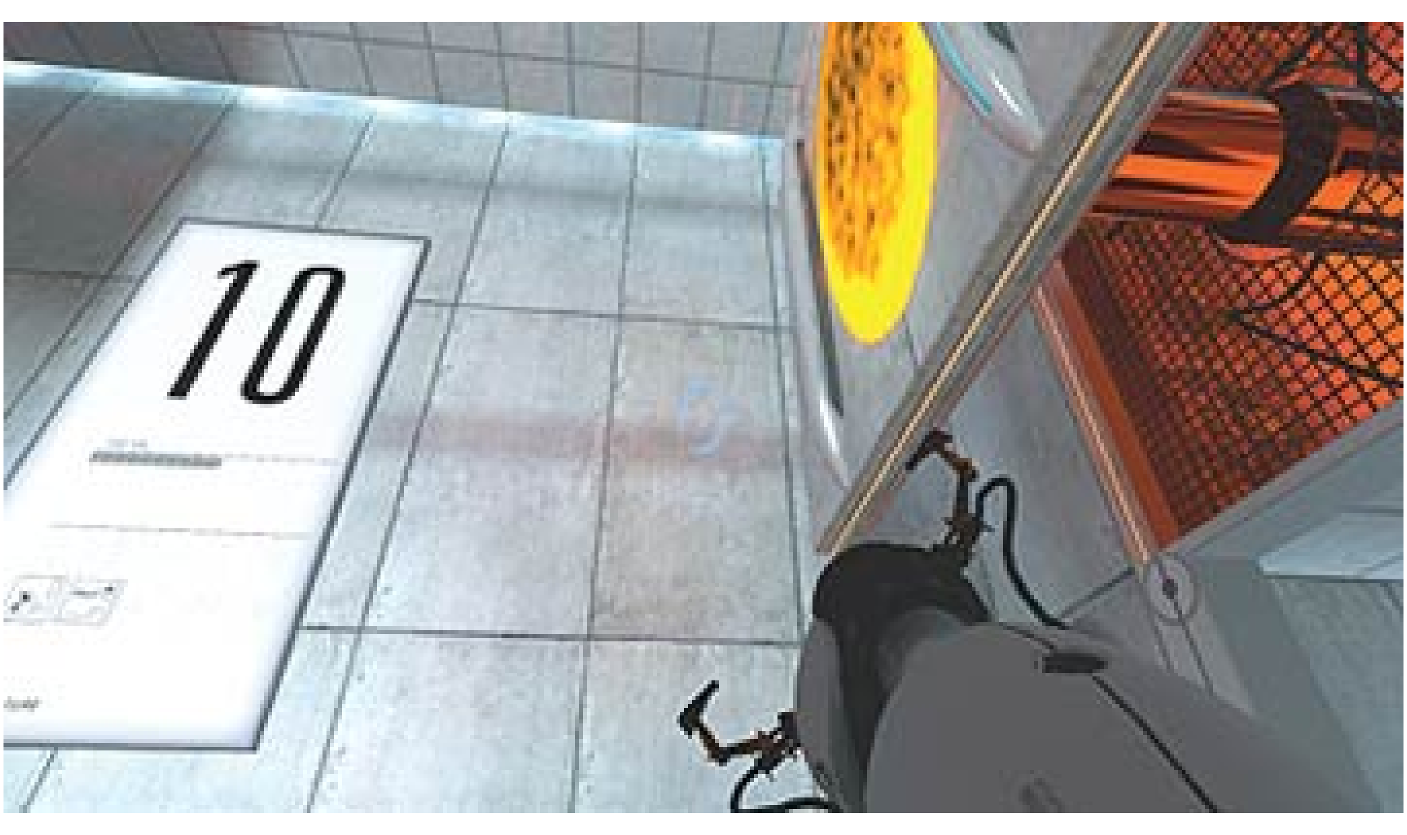
Test Chambers

Chamber 10

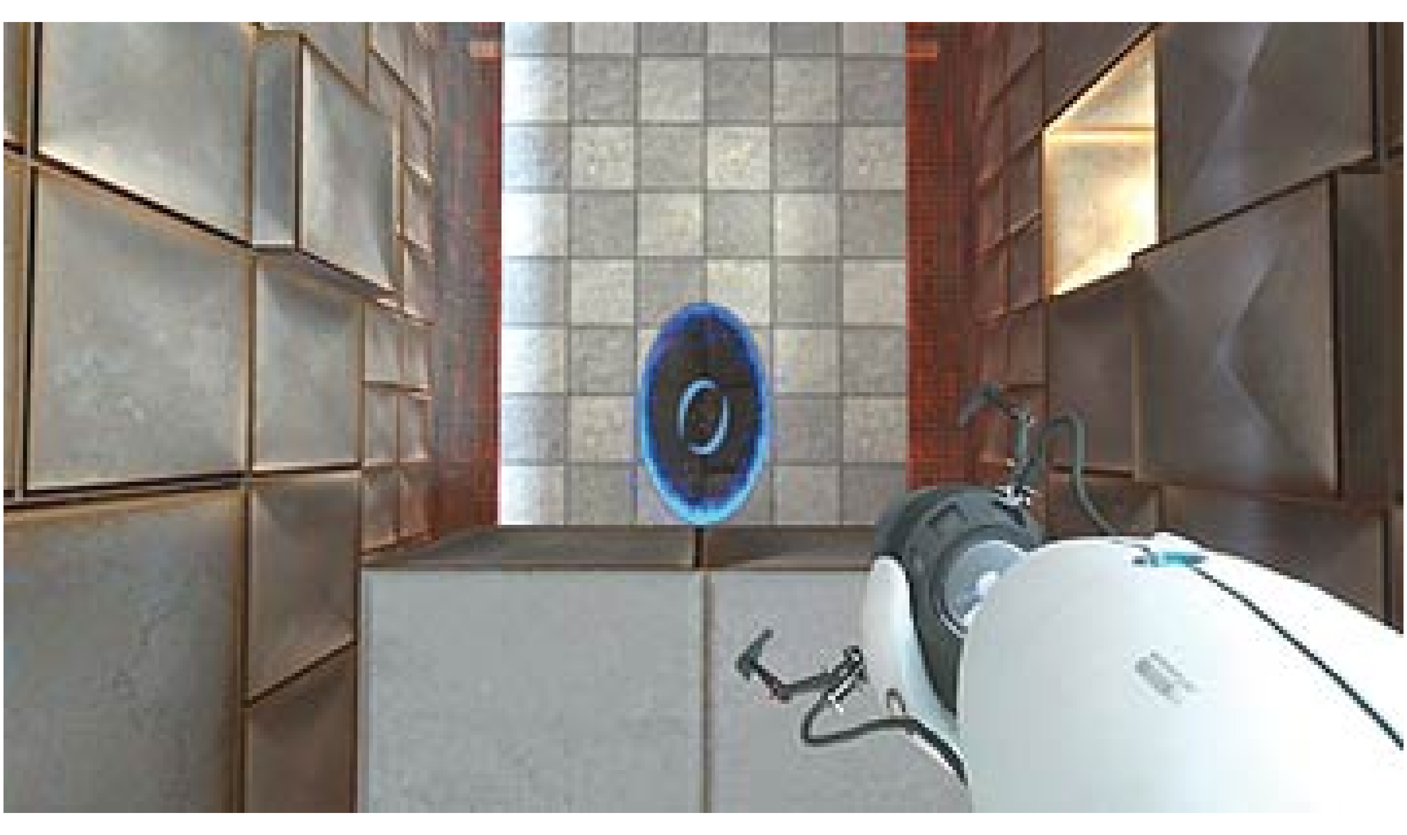


Map Legend
1.Test Chamber 10 Start Point
2.Test Chamber 10 End Point

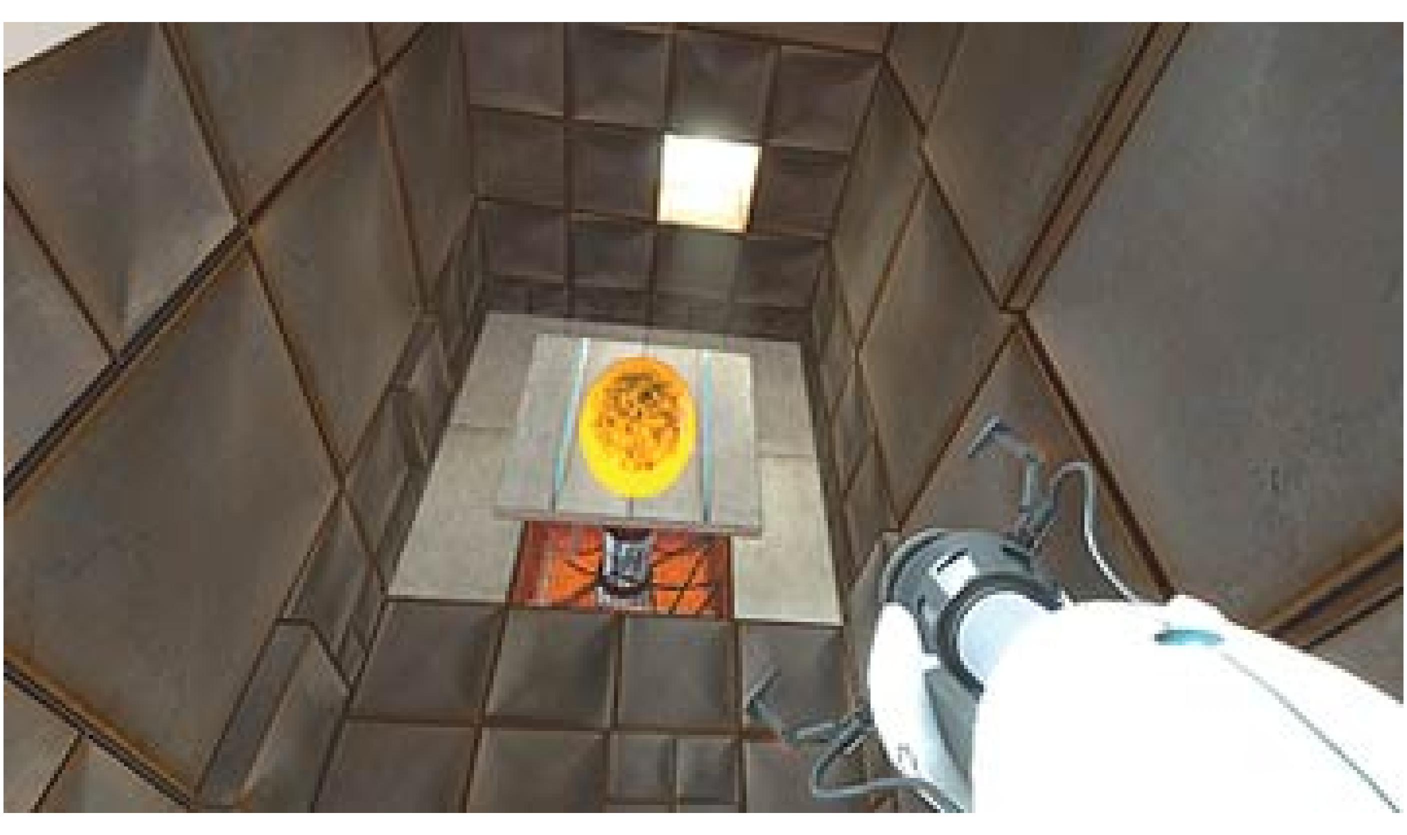


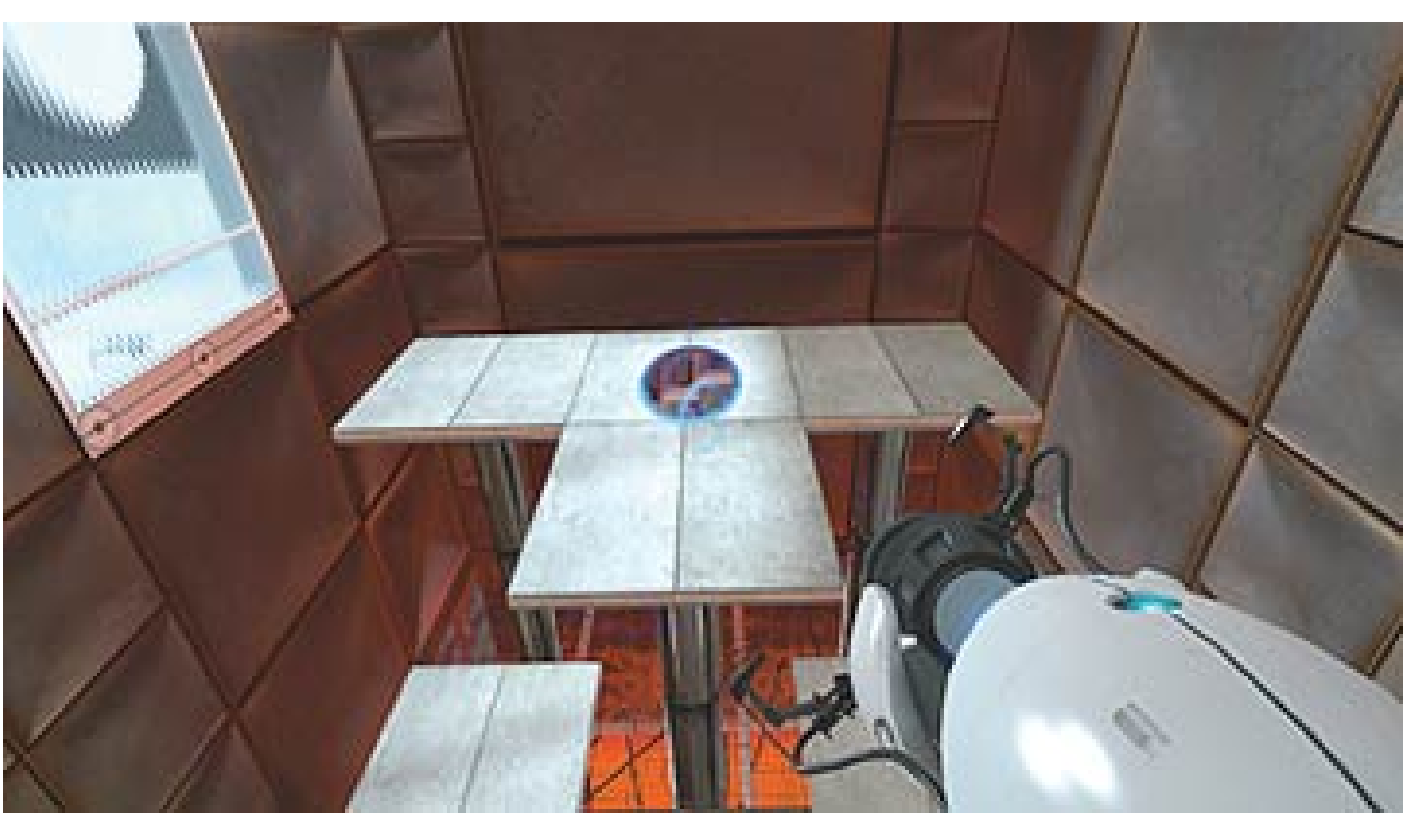


The first thing you see upon entering is a series of steps leading up. Problem is, the first step is too high for you to climb. But that's OK—you have a portal gun. Fire a portal on either wall. Turn around and check out the orange portal that's directly behind you. Now walk through the blue portal you've just fired and fly out of this orange one onto the previously unreachable bottom step. Keep this technique in mind: You're going to employ it a whole lot more really soon. Move into the next room.

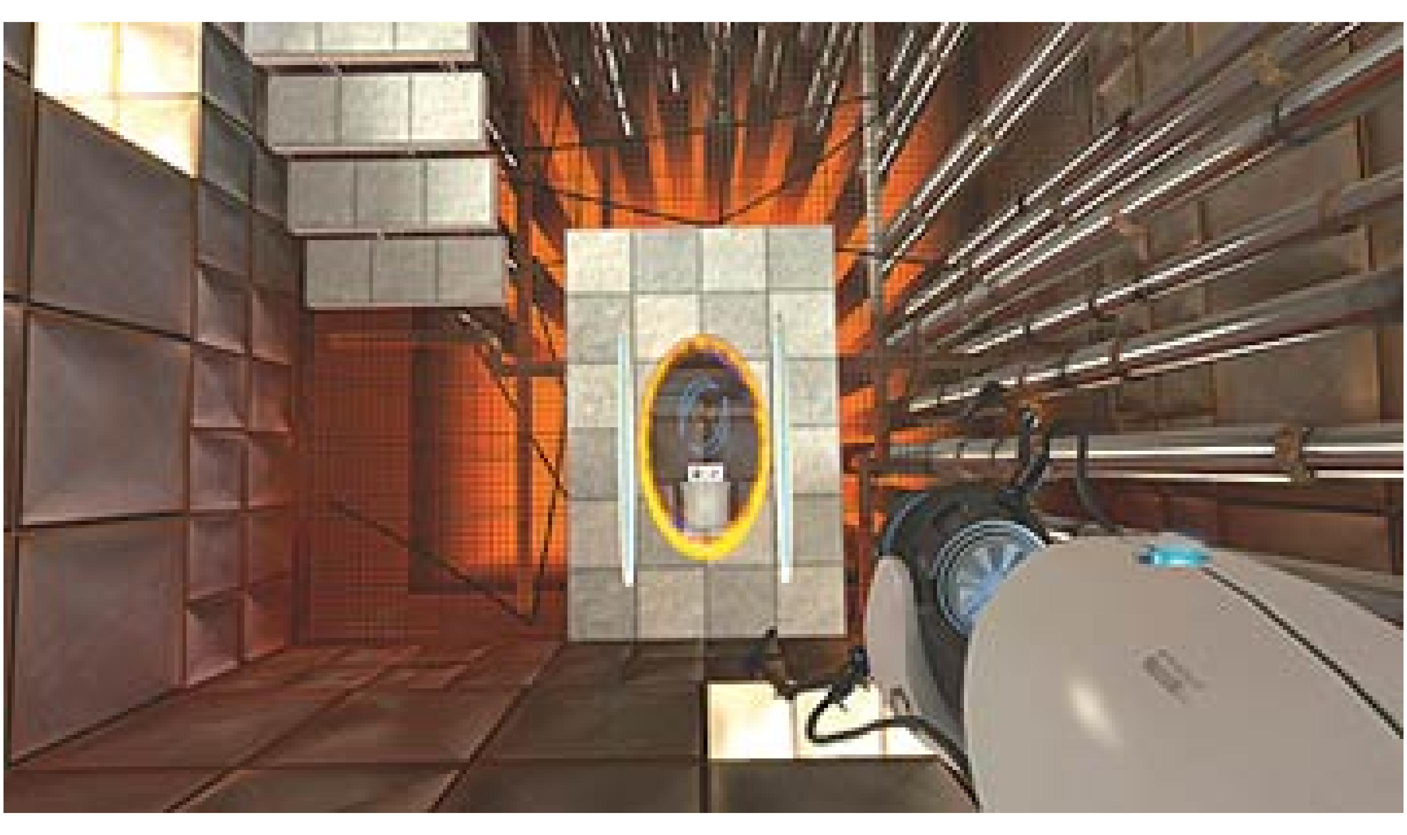


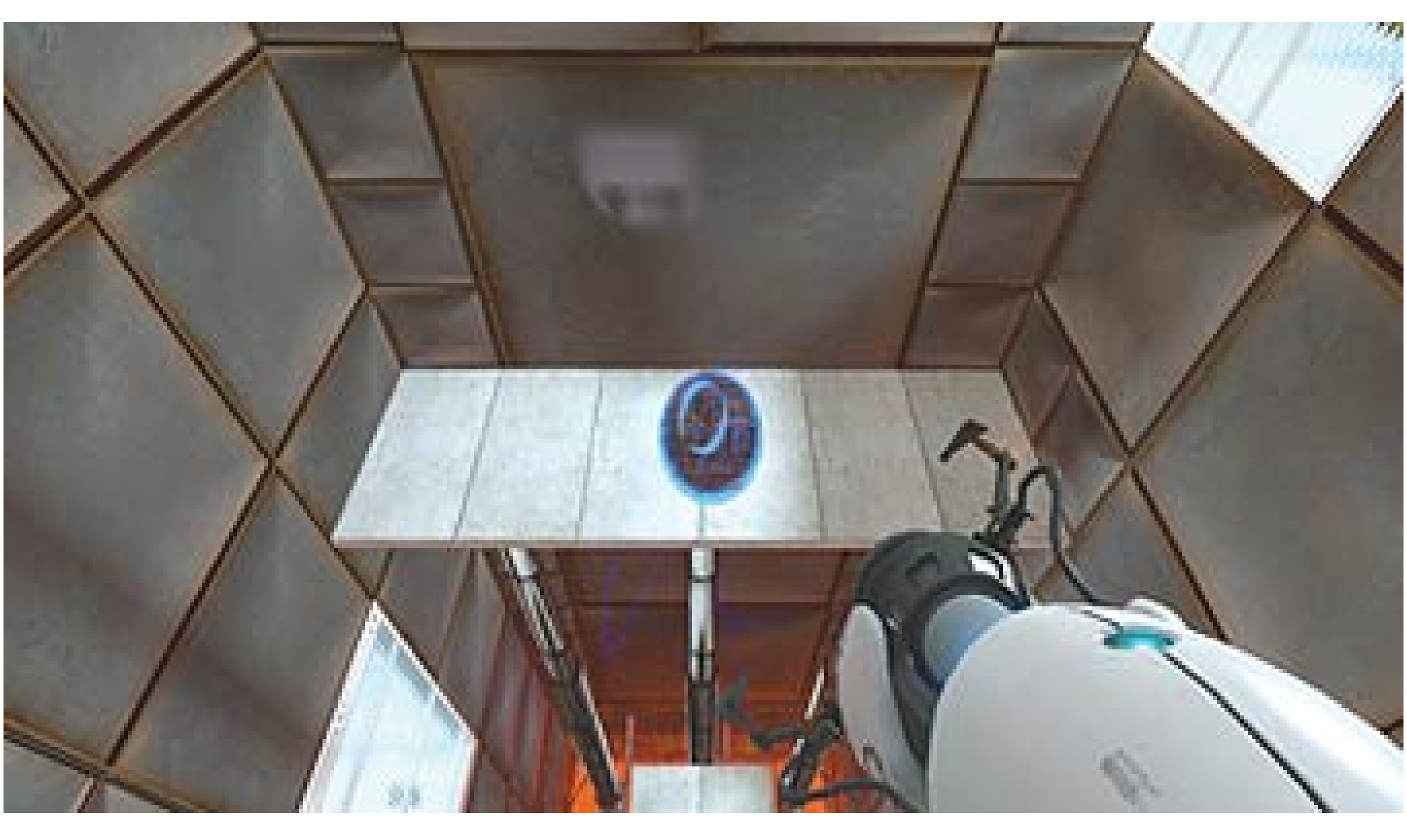
Don't be discouraged by the lack of portal-friendly surfaces in this room. Just walk to the ledge, and place a blue portal down in the pit. Just like in the previous room, there's an orange portal directly above the entrance, right behind you when you come in. Jump through your blue portal. Your downward momentum turns into forward momentum when you emerge from the orange portal. This technique is called "Flinging," and in this instance it has generated more than enough momentum to propel you across the chasm.

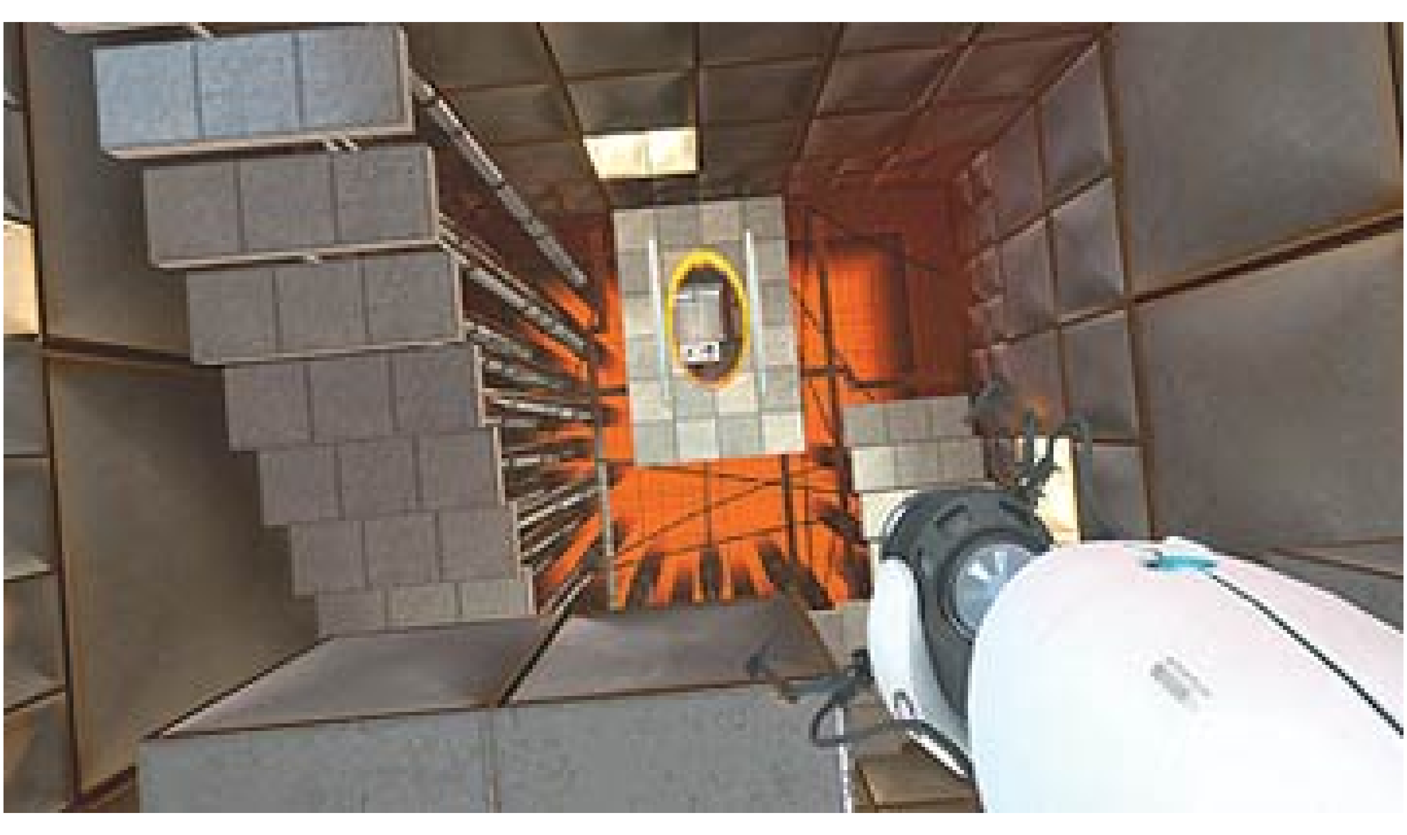




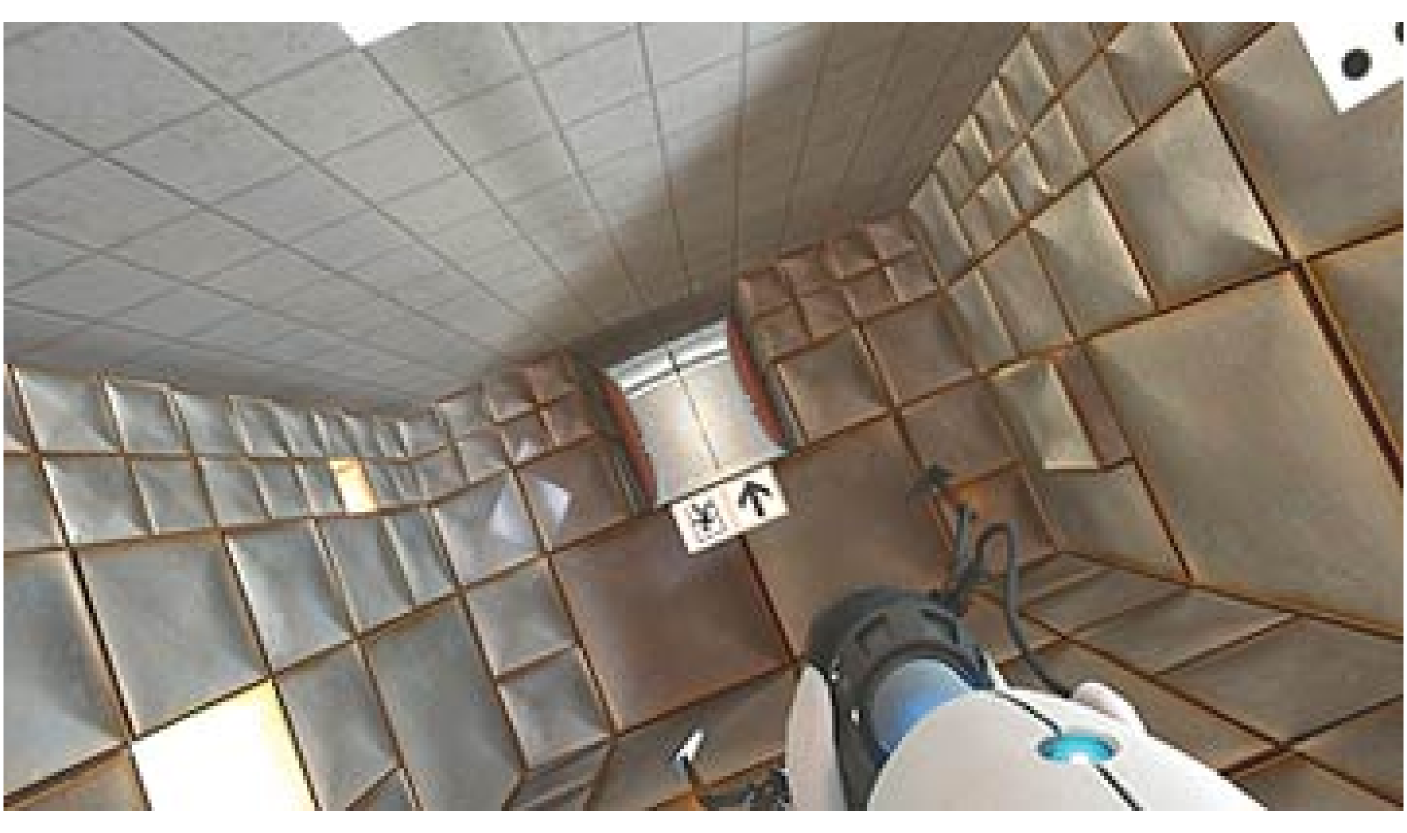
The next room is merely an extension of this exercise, albeit a very fun one. This time around, there's an orange portal in the pit. Turn 180 degrees from the entrance, and fire a blue portal at the top of the T-shaped, piston-driven panel after it fully extends. Jump through the orange portal in the pit and fling yourself to the next ledge.





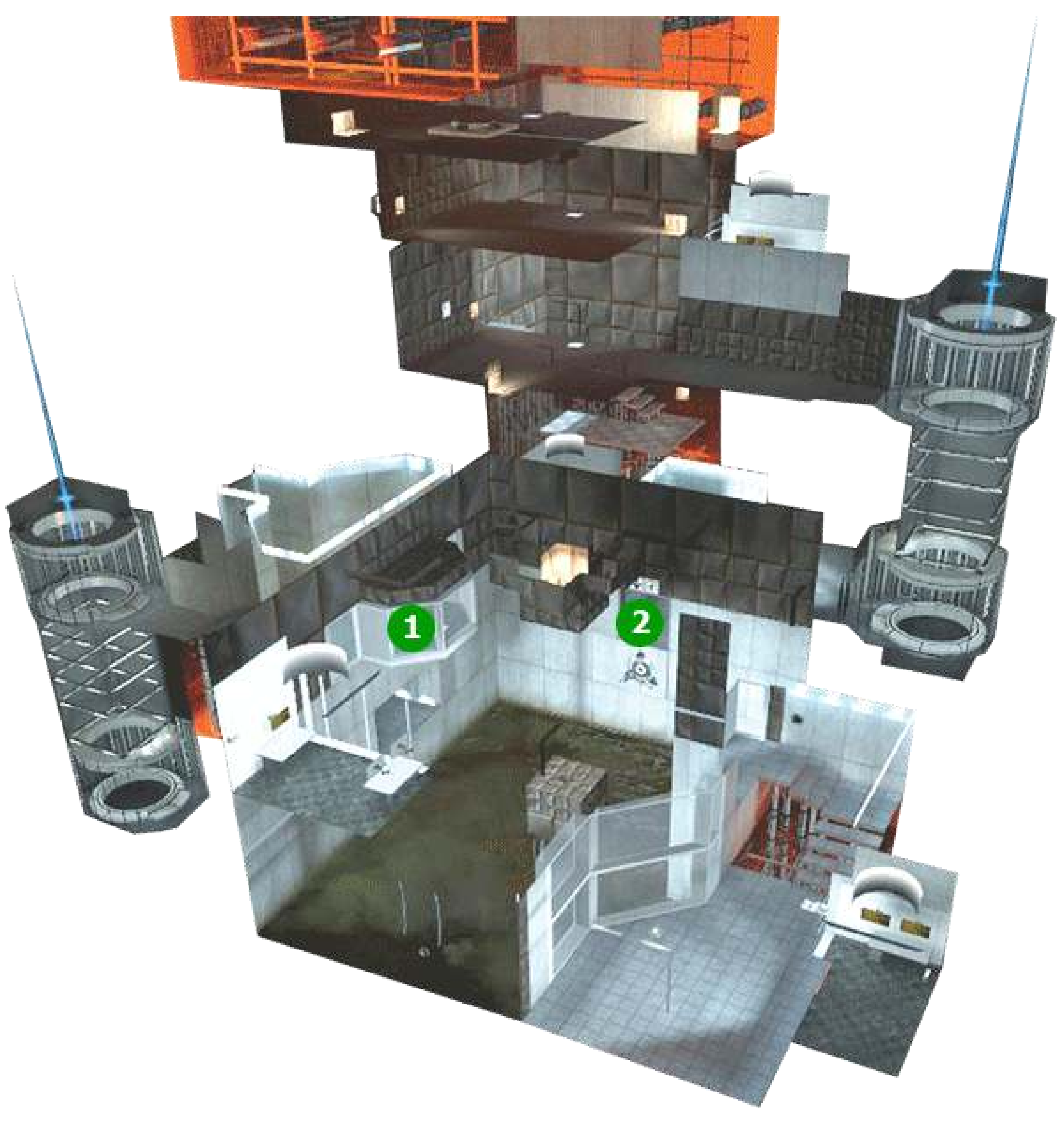


On this ledge, there's a second piston-driven panel extending even farther out behind you. Aim a blue portal at its center, jump through the orange portal in the pit, and revel in the farthest, fastest fling you've yet experienced. The exit is right before you.

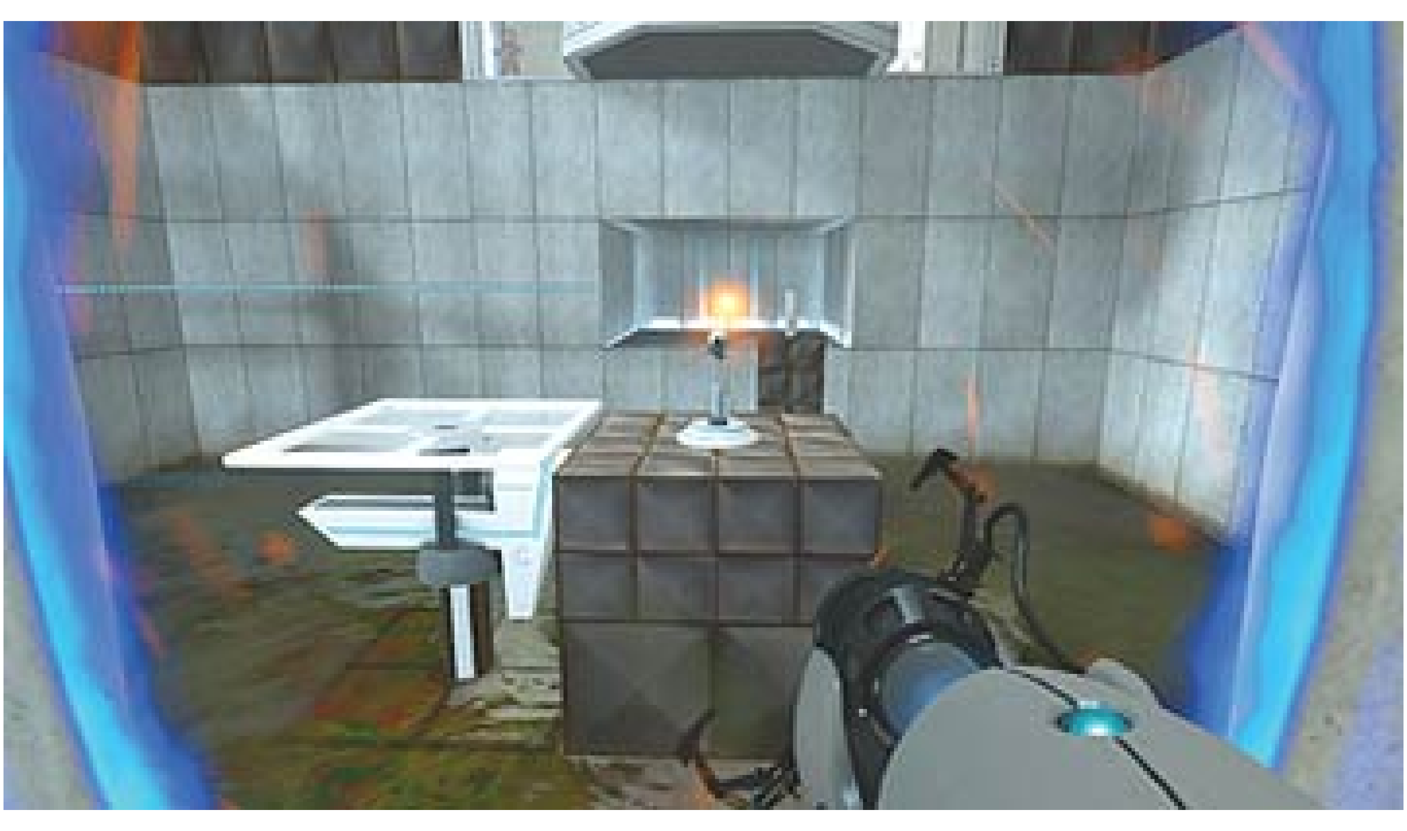


Test Chambers

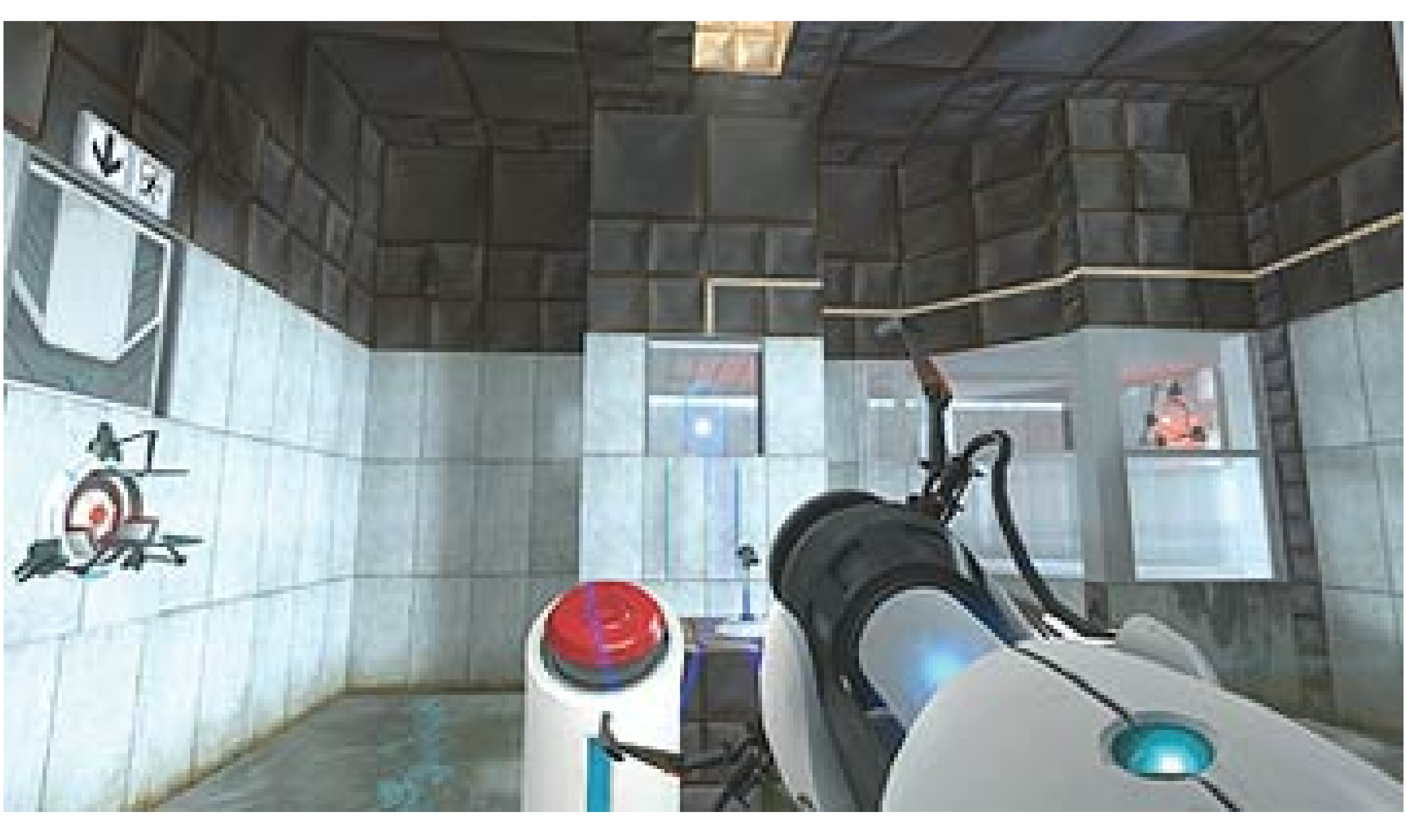
Chamber 11

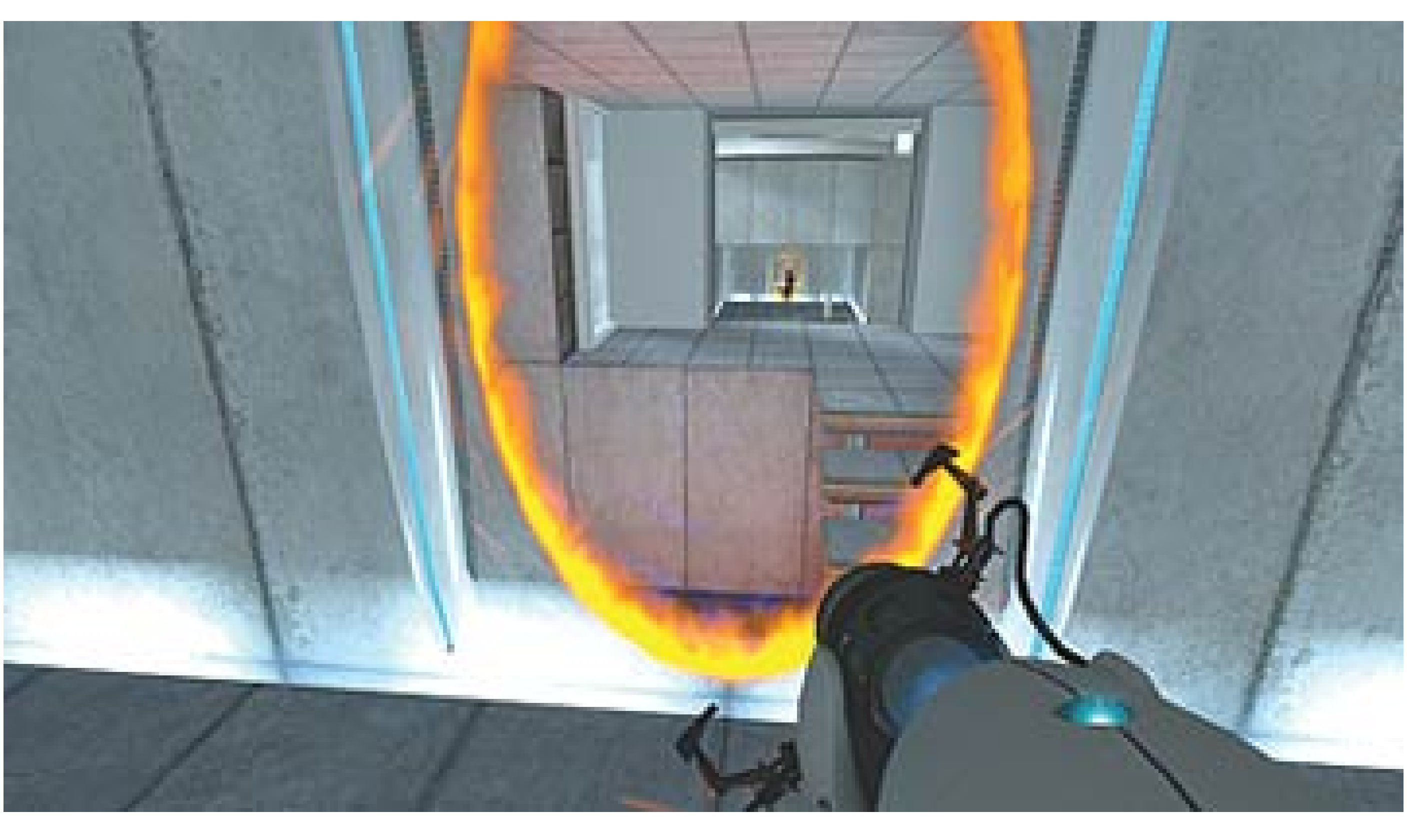


Map Legend
1.Test Chamber 11 Start Point
2.Test Chamber 11 End Point

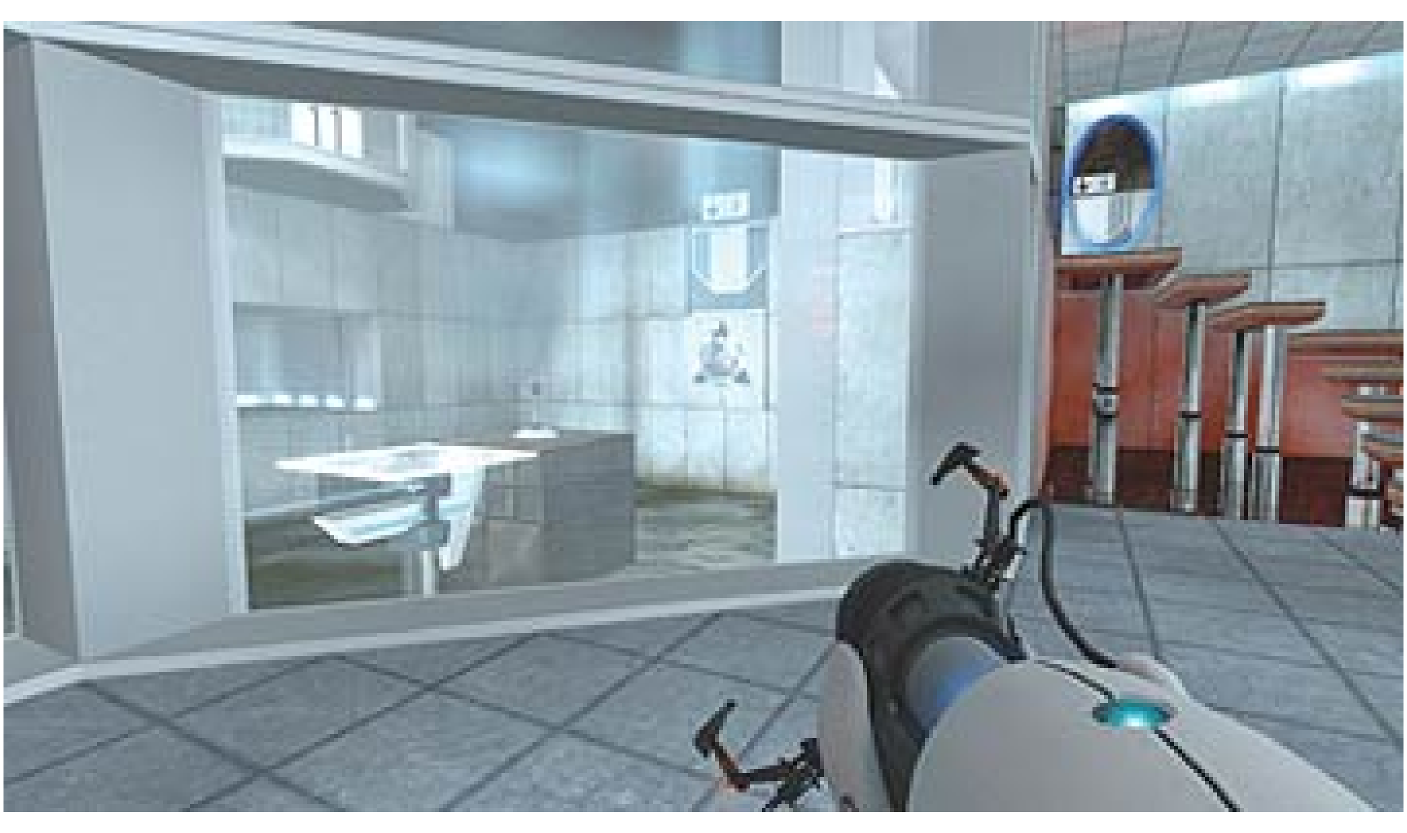


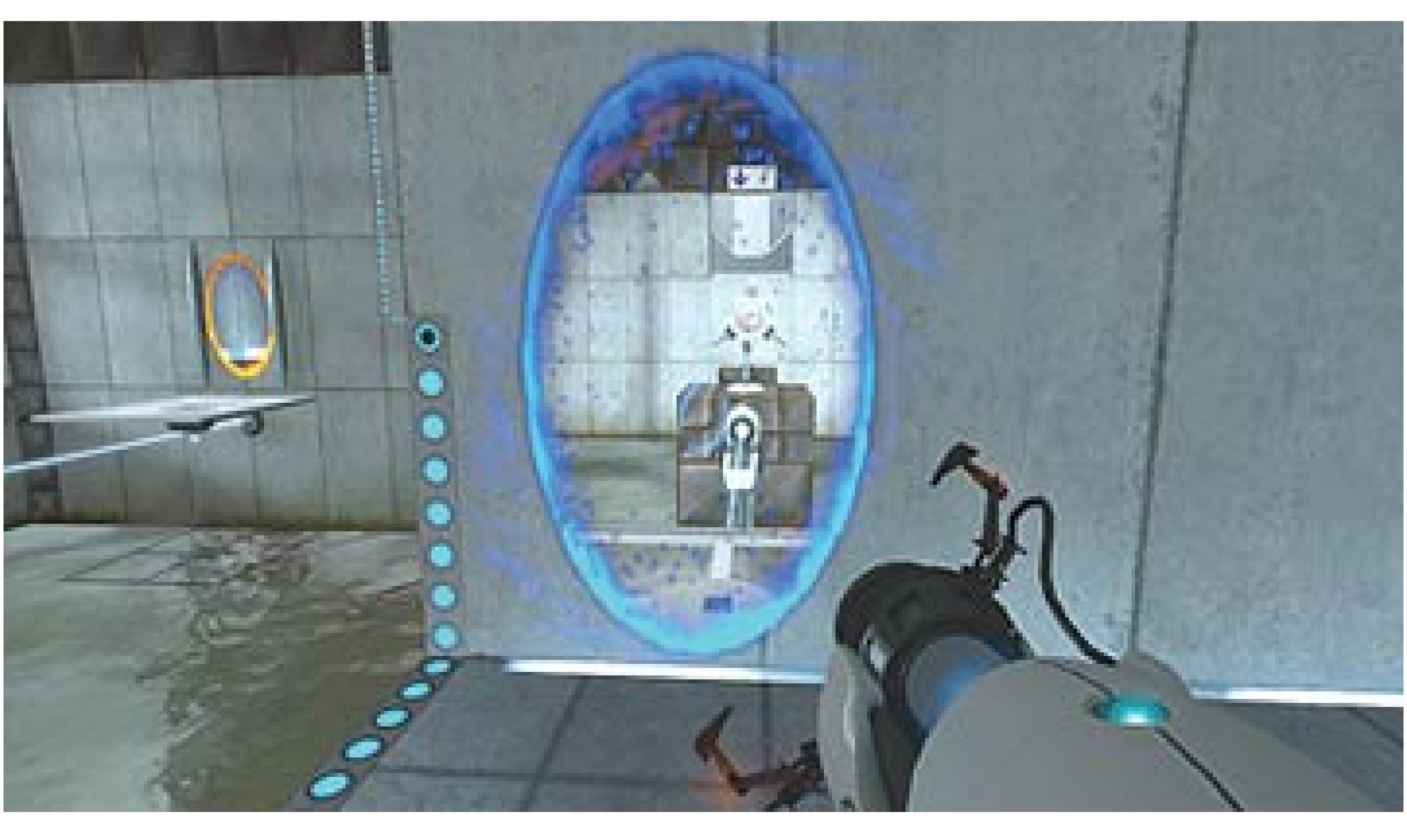
Test Chamber 11 looks a little intimidating at first. The first thing you notice is the orange portal gun fixed to a rotating arm in the chamber below you, mounted on a platform that's surrounded by toxic goo. It will soon be yours! First, place a blue portal on the wall to your right. Cross into it only when you can see firm ground on the other end—since the orange portal gun is on a rotating arm, you may have to wait until it does a full cycle. You're looking for a room with a red switch.



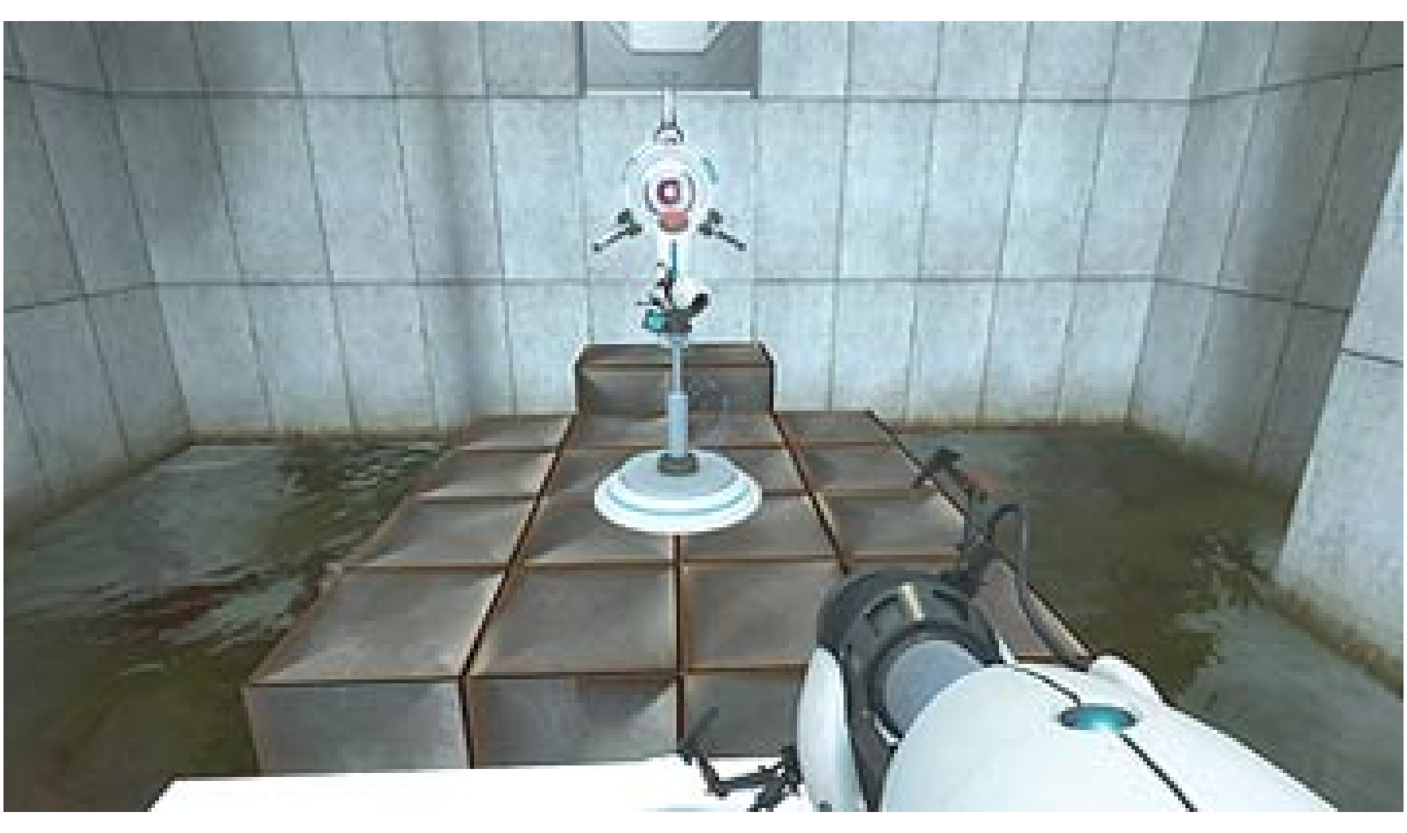


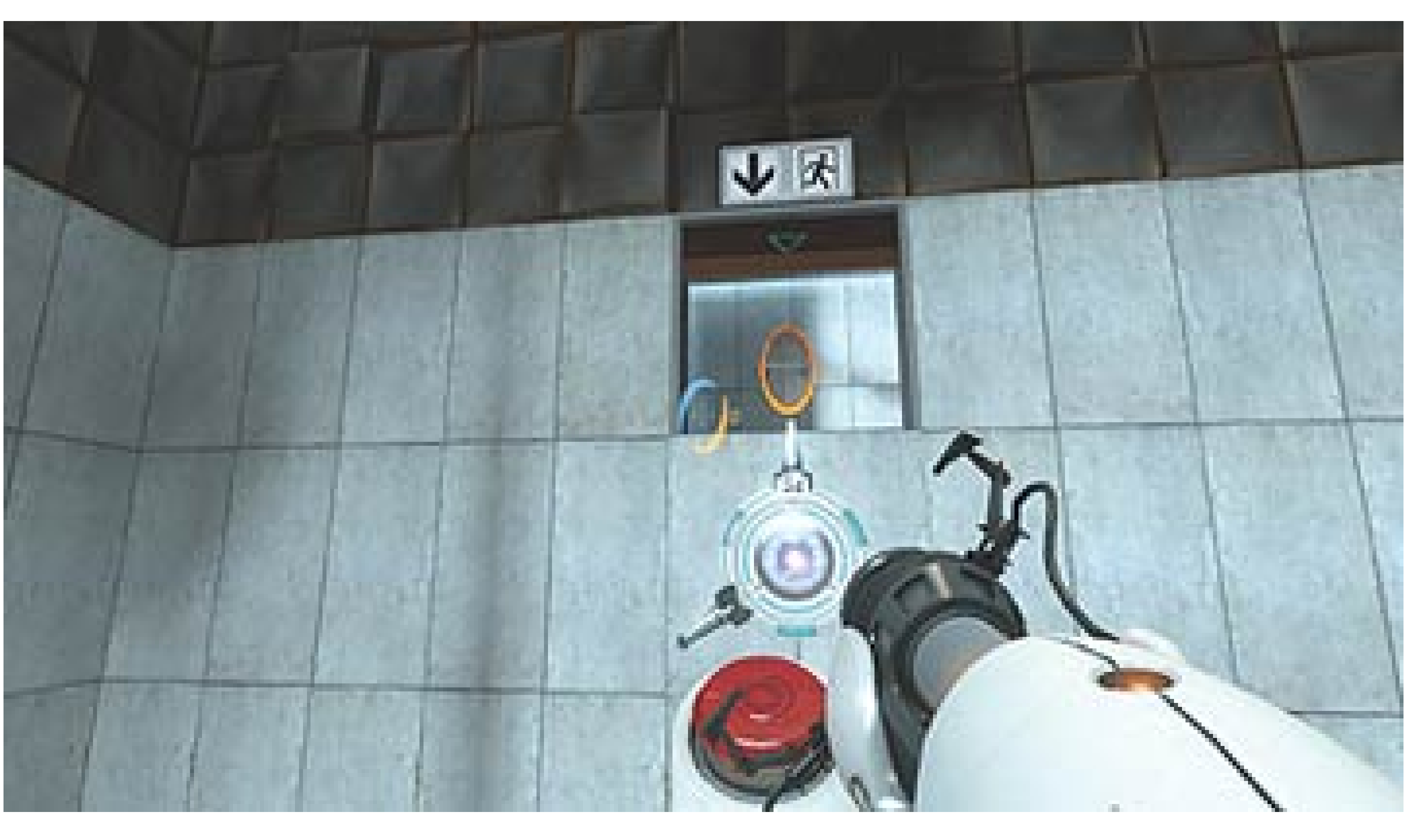
When you see the switch, hop through, hit the switch, and fire a blue portal on the surface behind the panel that just retracted above you on the far end of the room. You should still have time to back out of the orange portal, but if not, just wait until it cycles to your position again.



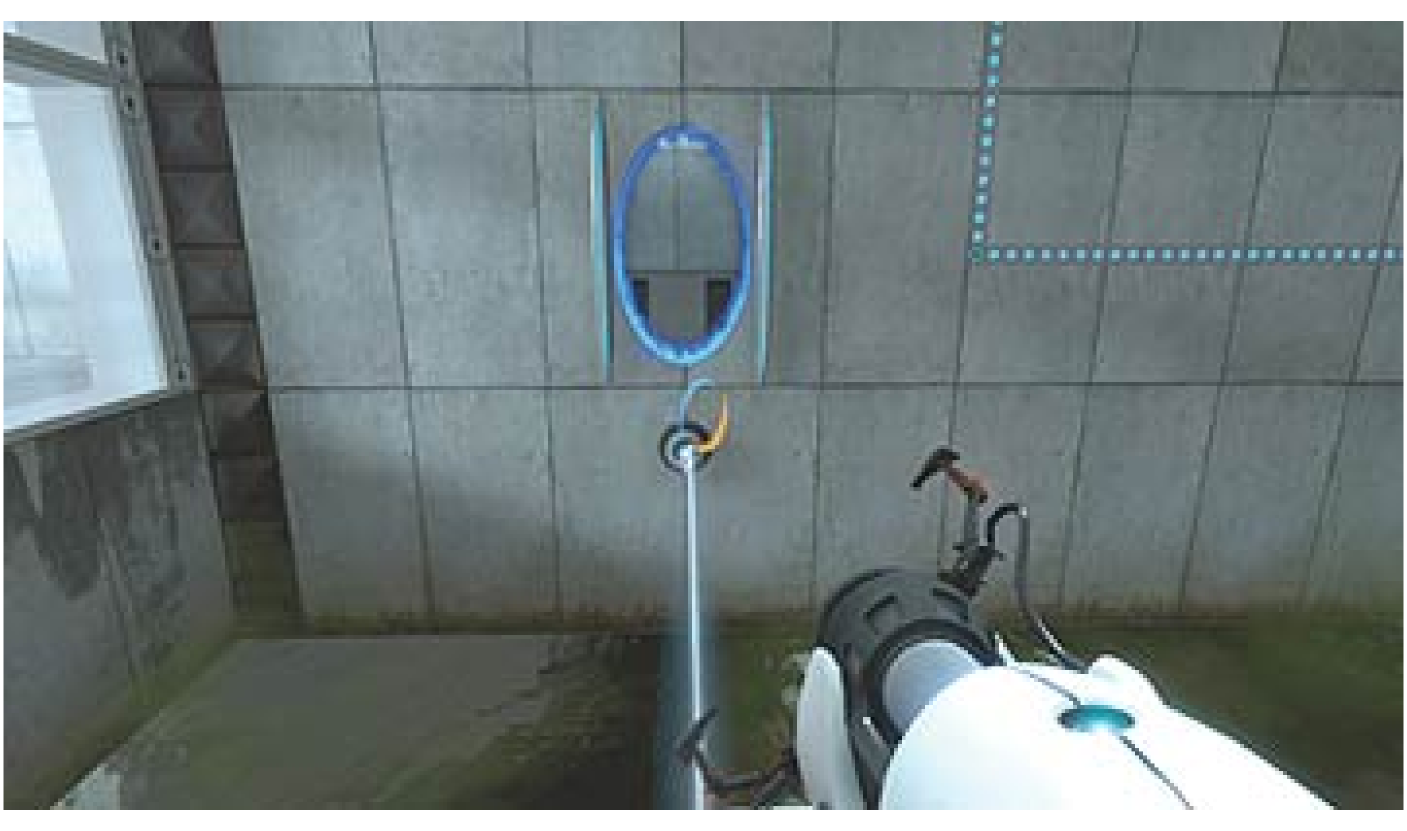


You've just entered a room with a series of stairs and a Ball Launcher at the far end wall to the left of where you emerged. Stand directly below the Launcher, and give yourself a good vantage point through the glass wall. You must to see the direction that the orange portal gun is facing, as well as the Ball Catcher on the opposite end of the chamber beyond the glass wall. When the orange portal gun is aiming in the opposite direction from the Catcher, place a blue portal on the point where the energy ball makes contact with the wall in the room you're in, again, look for the charred spot. The ball goes through the blue portal into the Catcher in the next room and activates the horizontal lift. Wait for orange portal gun to place a portal near the newly activated lift's destination on the far wall, then walk onto it.



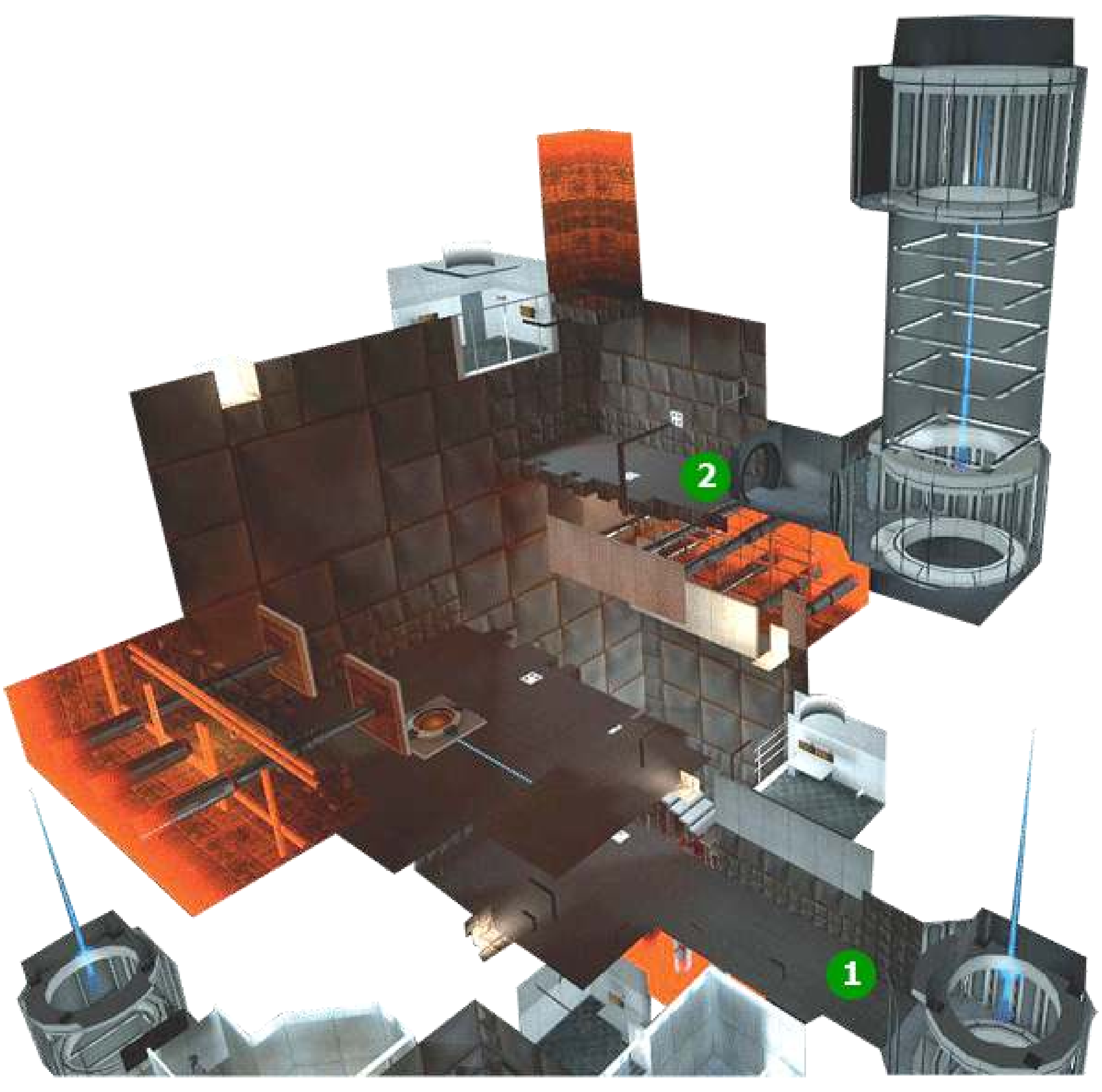


The lift ferries you to your prize—the orange portal gun! Snatch it, and activate the switch just ahead of it. Fire an orange portal behind the retracted panel, and wait for the lift to come back. Once it takes you back to the wall, fire a blue portal, walk through, and proceed to the exit. Well done! You are now in possession of the fully realized Aperture Science Handheld Portal Device! You no longer need to be beholden to arbitrarily deployed orange portals. The power to fully distort spatial dimensions is now in your hands!

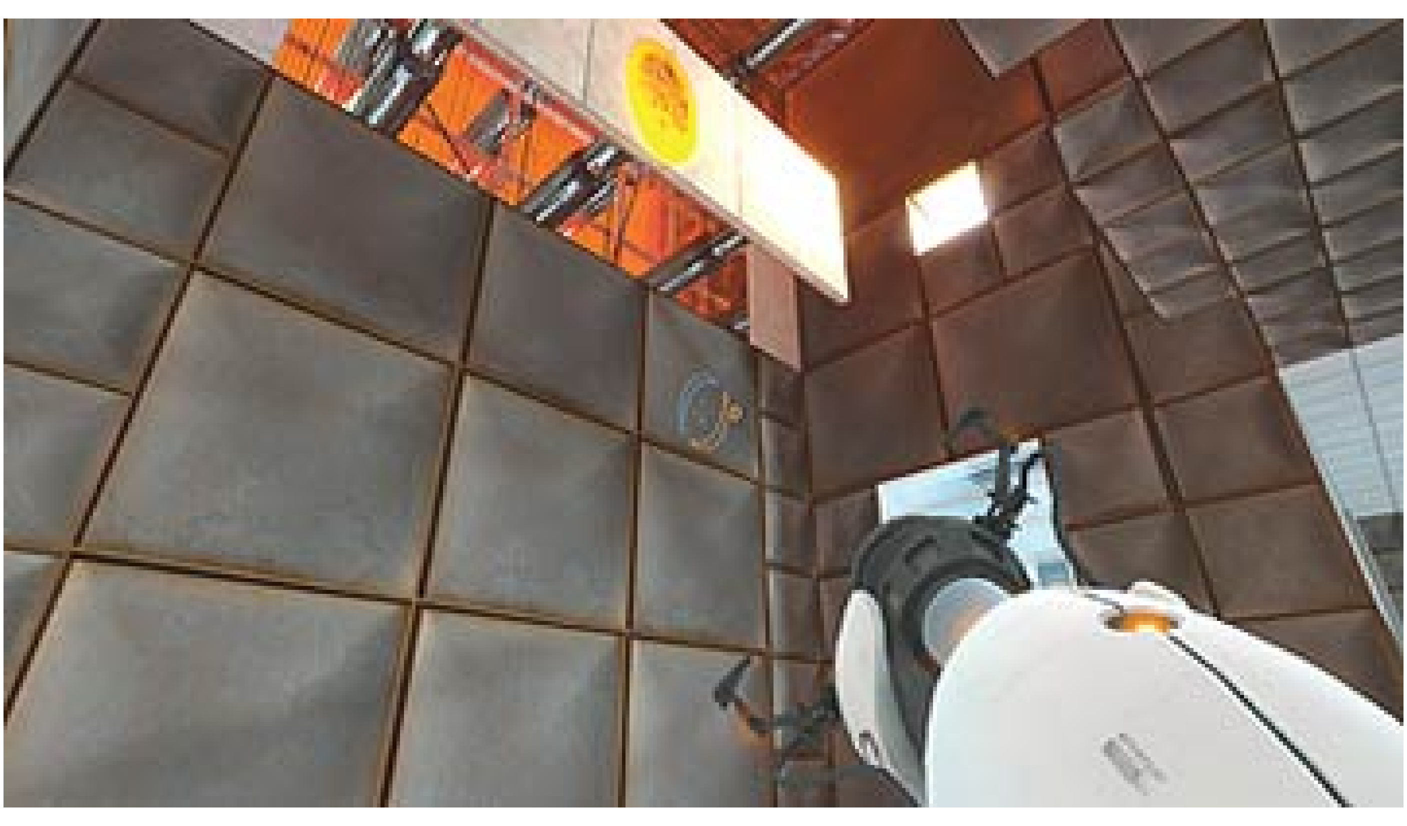


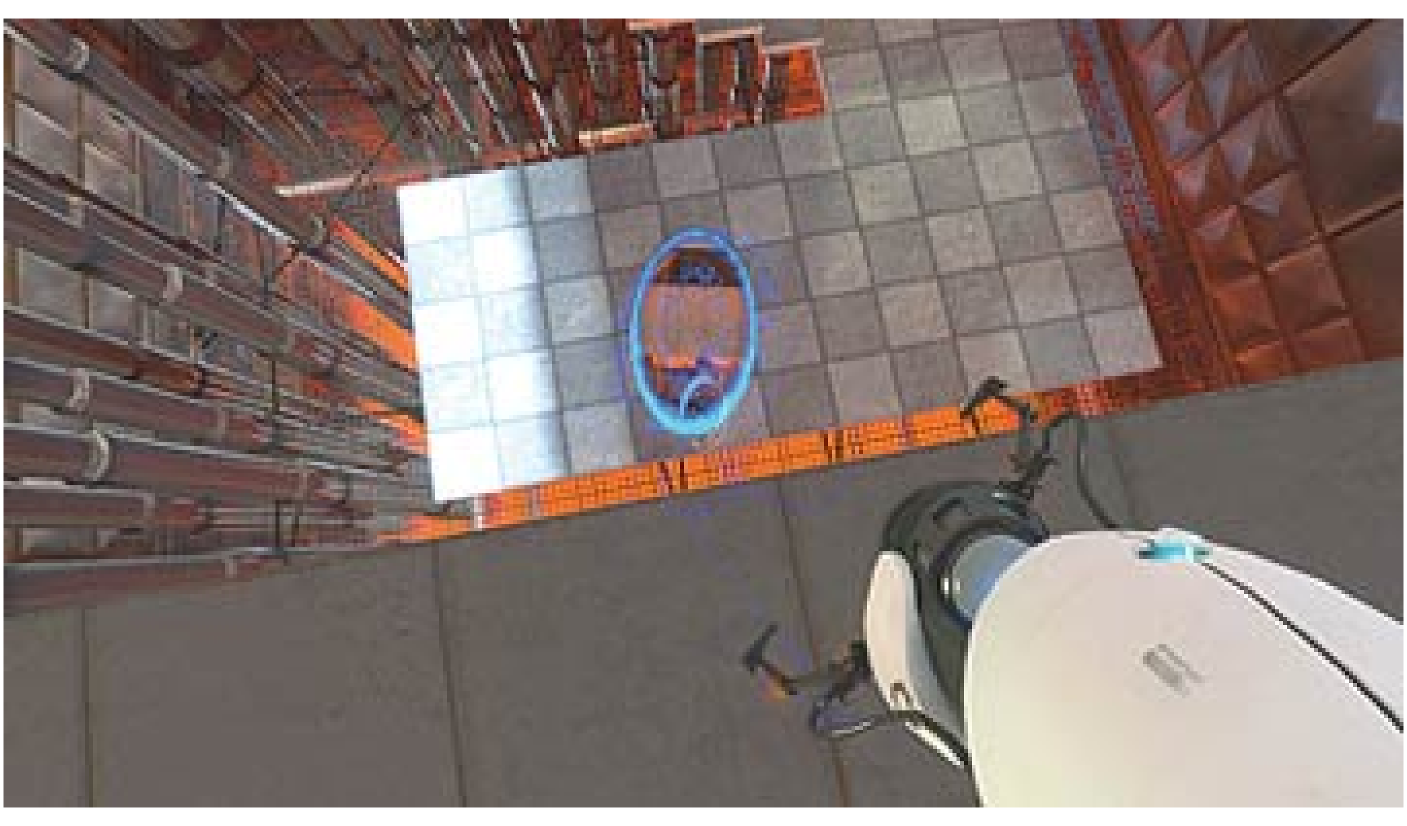
Test Chambers

Chamber 12

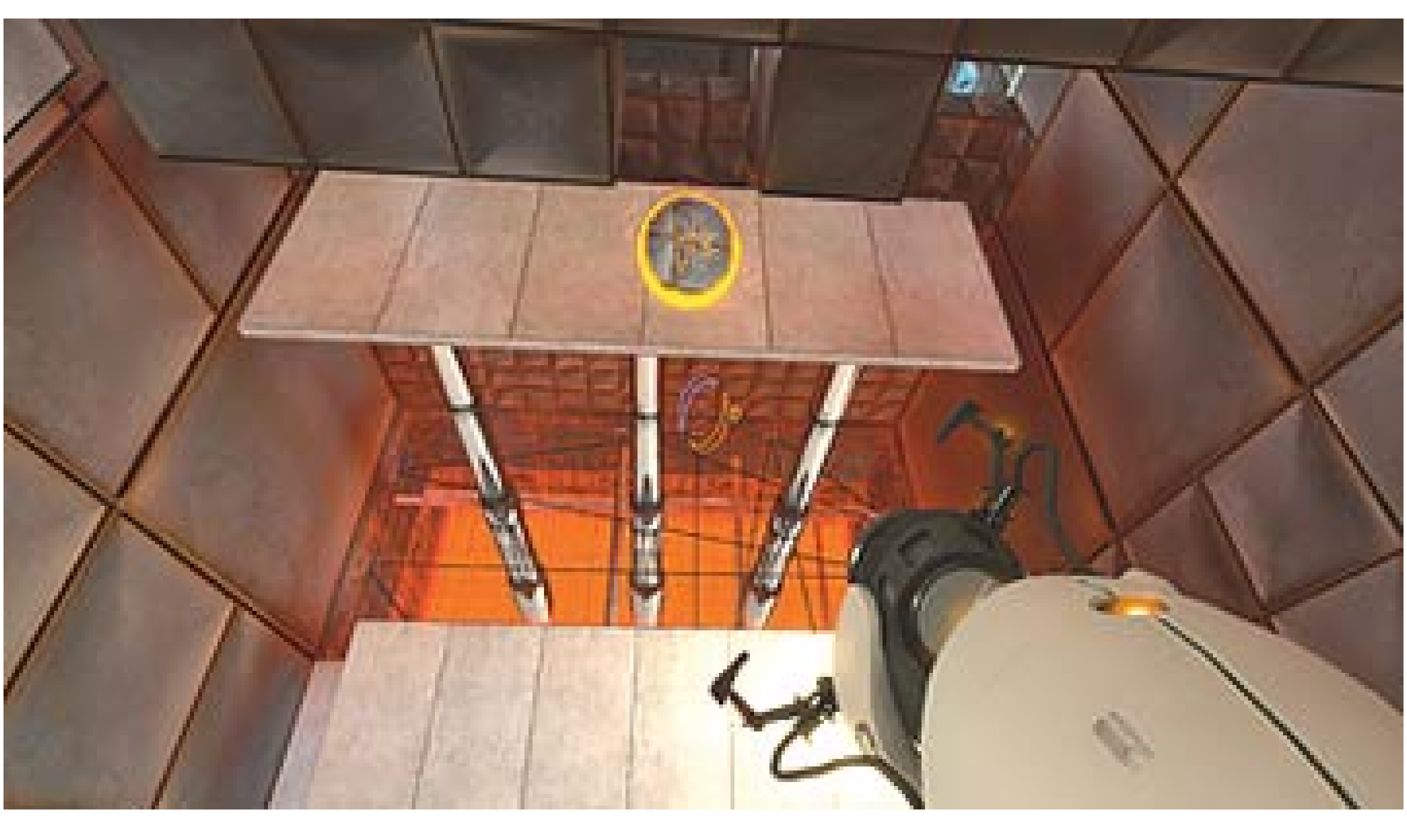


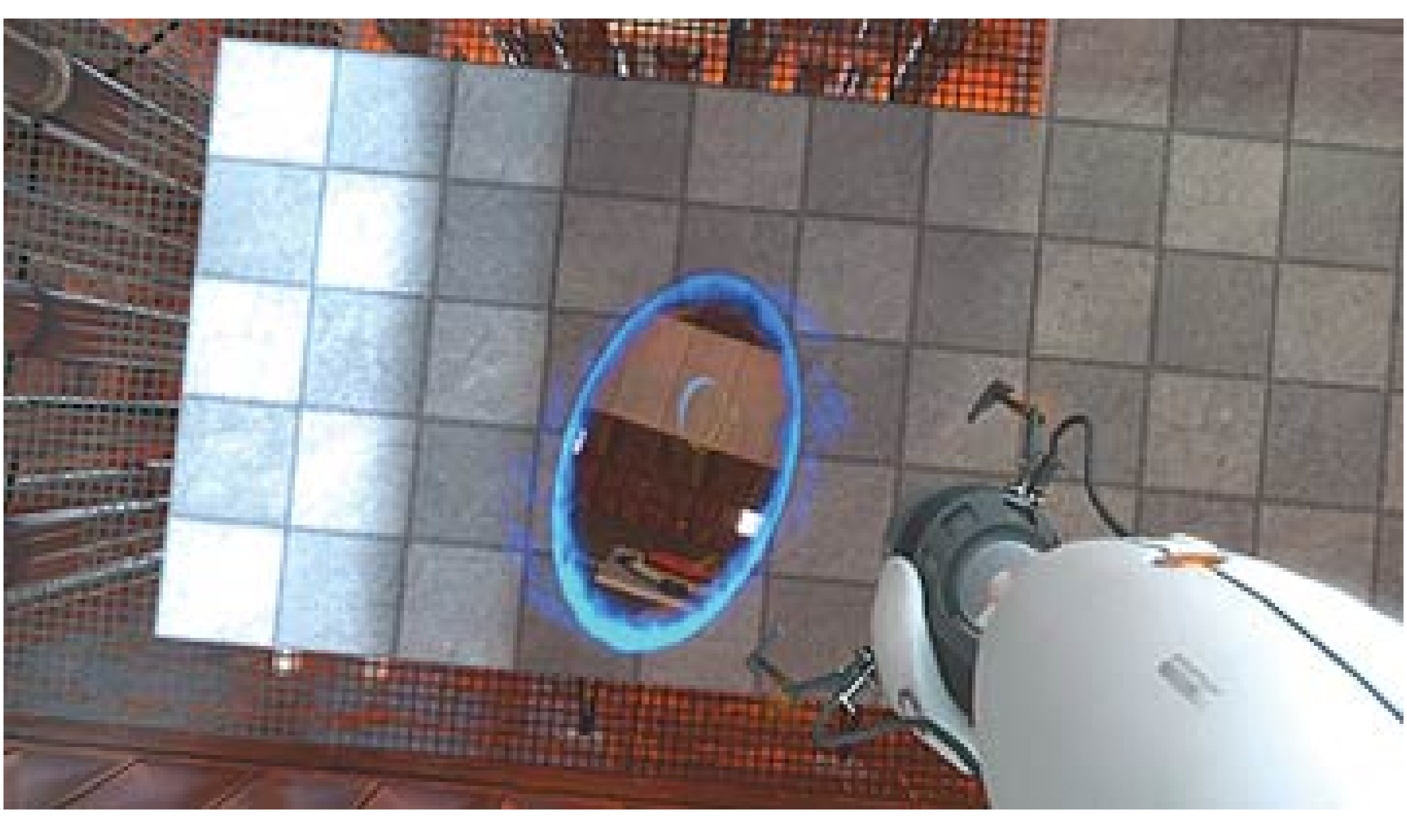
Map Legend
1.Test Chamber 12 Start Point
Test Chamber 12 End Point



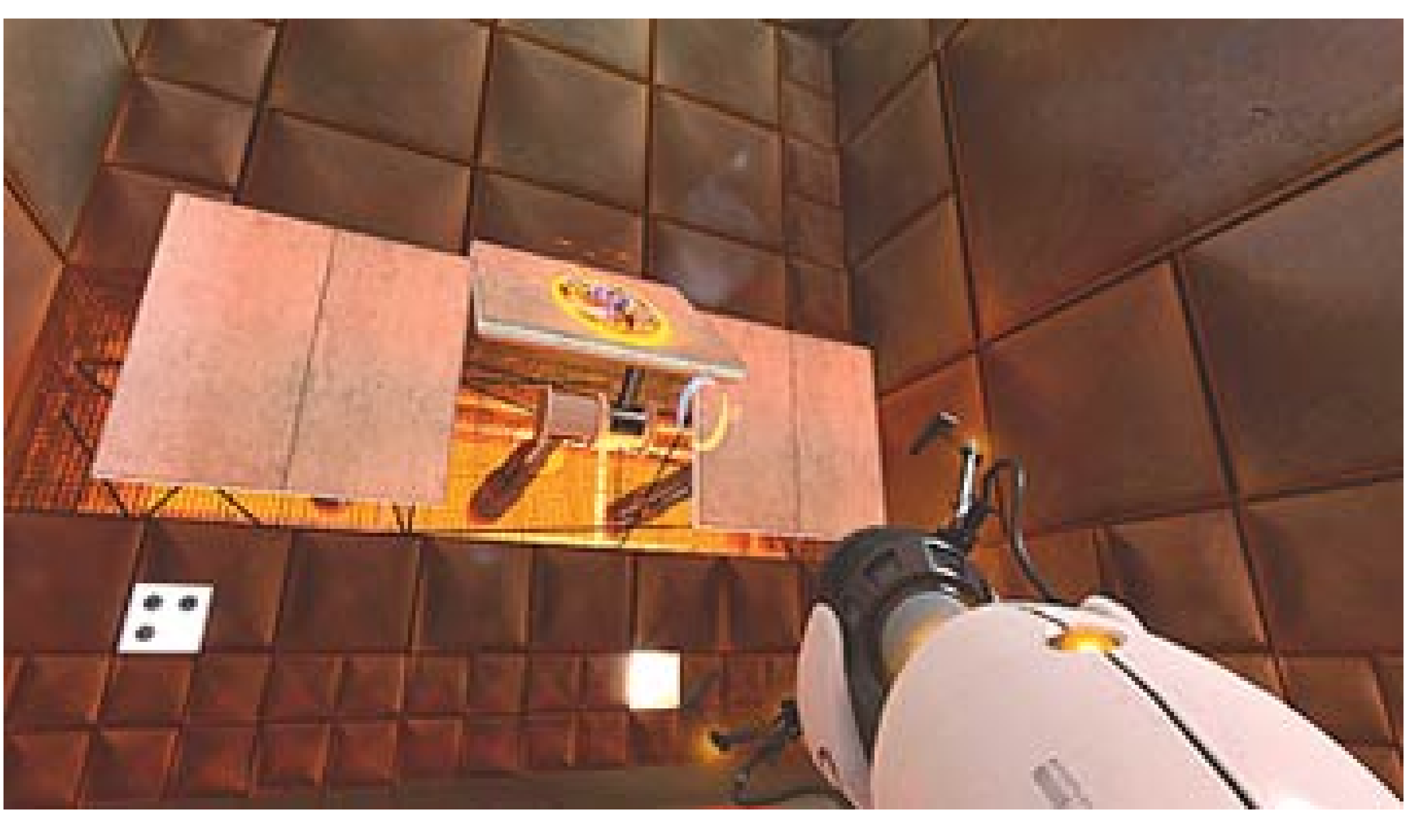


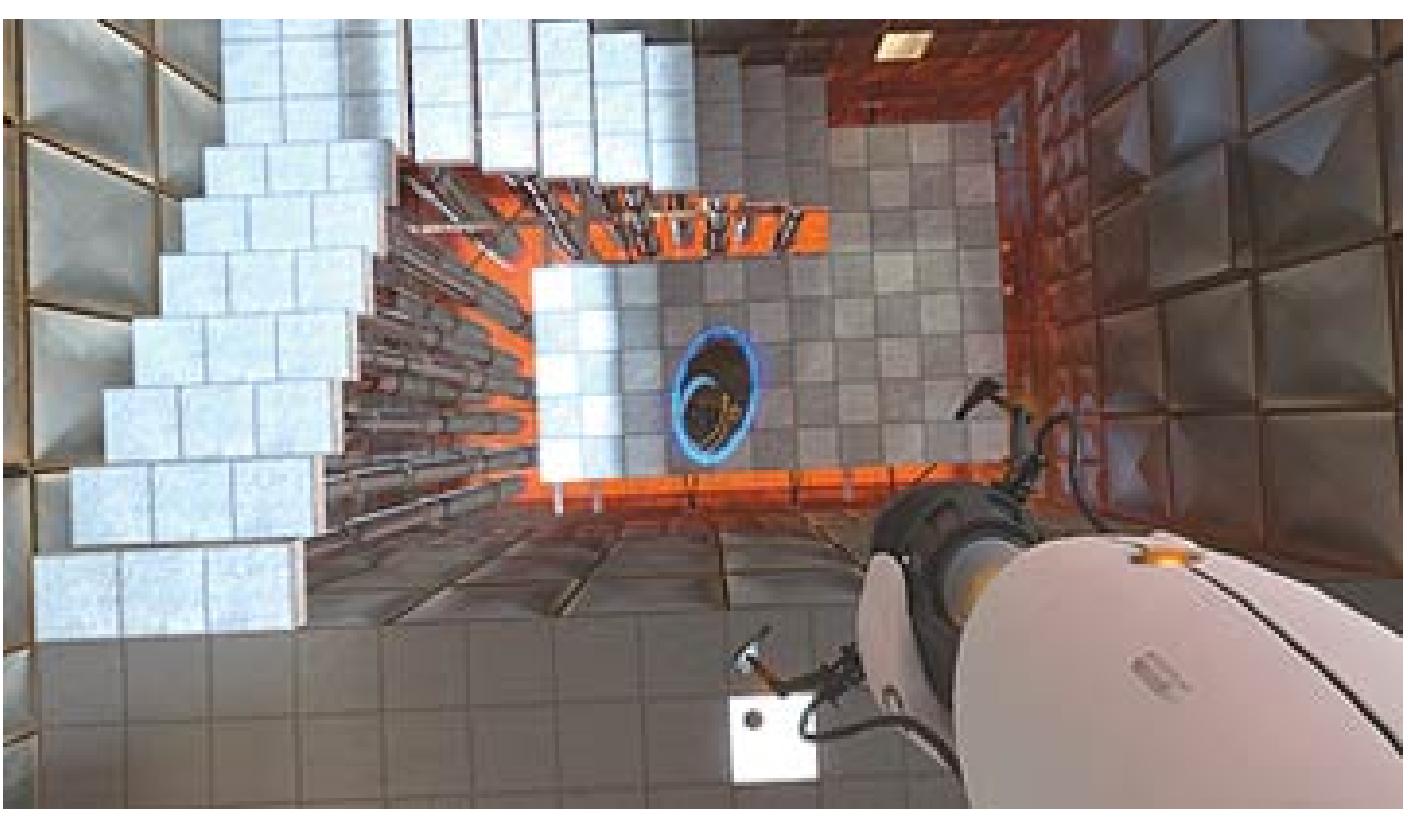
Ahead of you are a series of stairs. Don't descend them; they're just there in case you screw up, which you won't. Instead, fire an orange portal on the protruding panel right above the stairs. Now walk toward the edge of the room, drop a blue portal on the surface of the pit before you, and jump through it. Whee! You're going to have to do this again momentarily. Thankfully, Flinging never gets old.



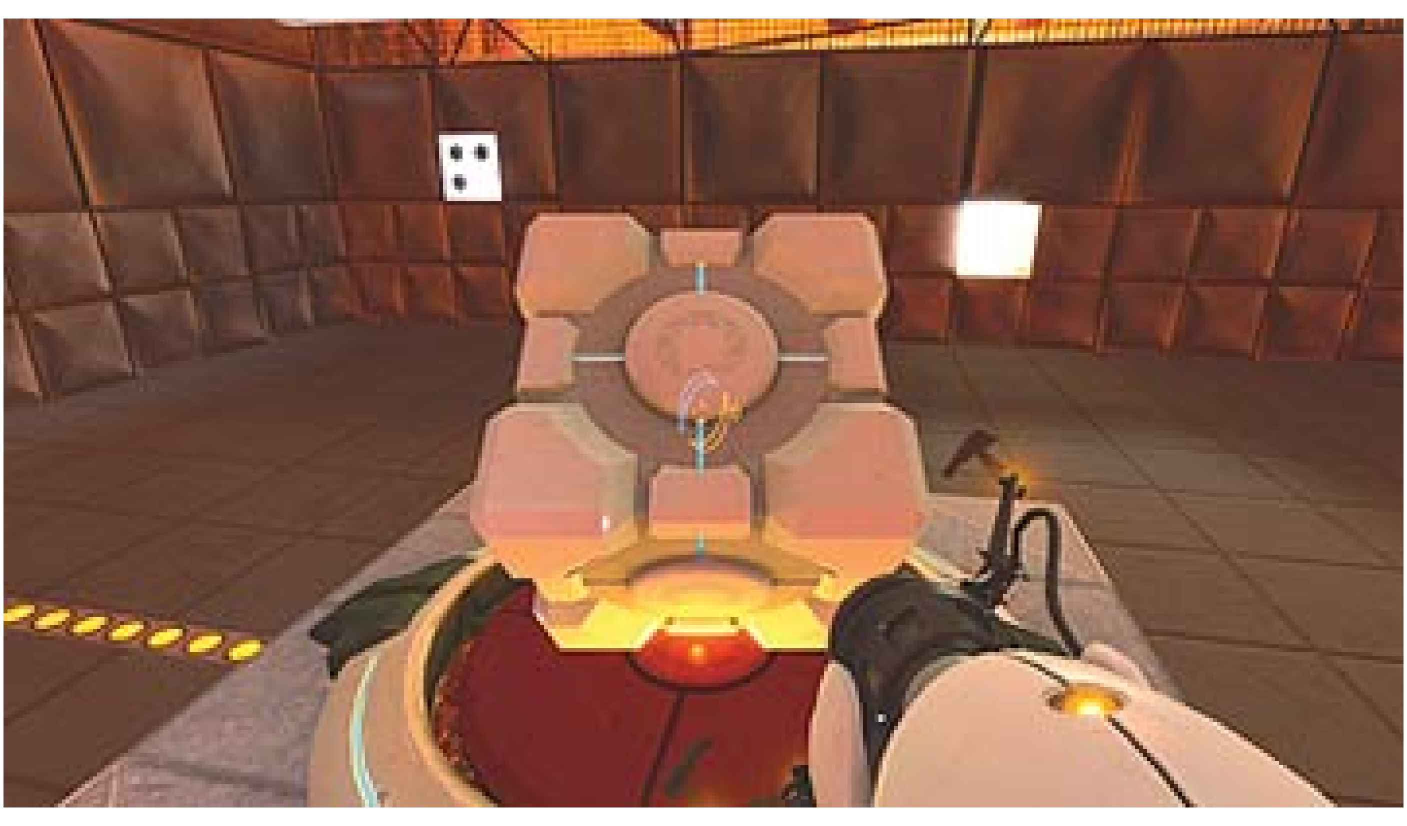


Turn 180 degrees from where you land, and you see the orange portal you just placed. Aim for the other protruding panel just above that one, and replace your orange portal there. Jump into the pit again, and fly to the next platform.



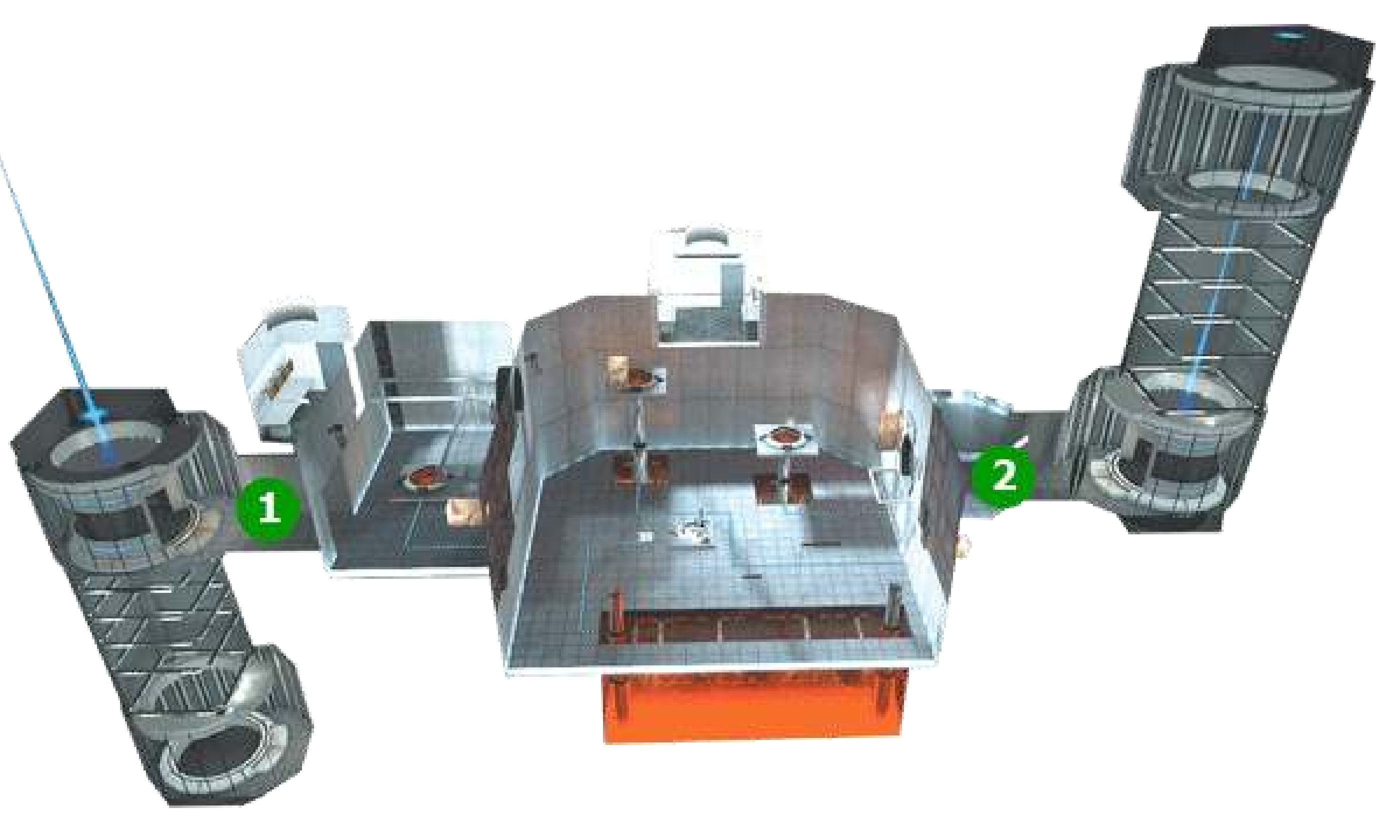


Another quick 180 reveals yet another protruding panel right above a red button on the ground. This one is slanted upward. Get ready for some fun and aim your orange portal on it. Drop down a level toward the second ledge you reached, and dive into the blue portal that's still down in that pit. Double whee! You've just performed a "Wedge Fling," so named because of the inclined nature of the exit point. This maneuver send you farther, faster than regular Flings.

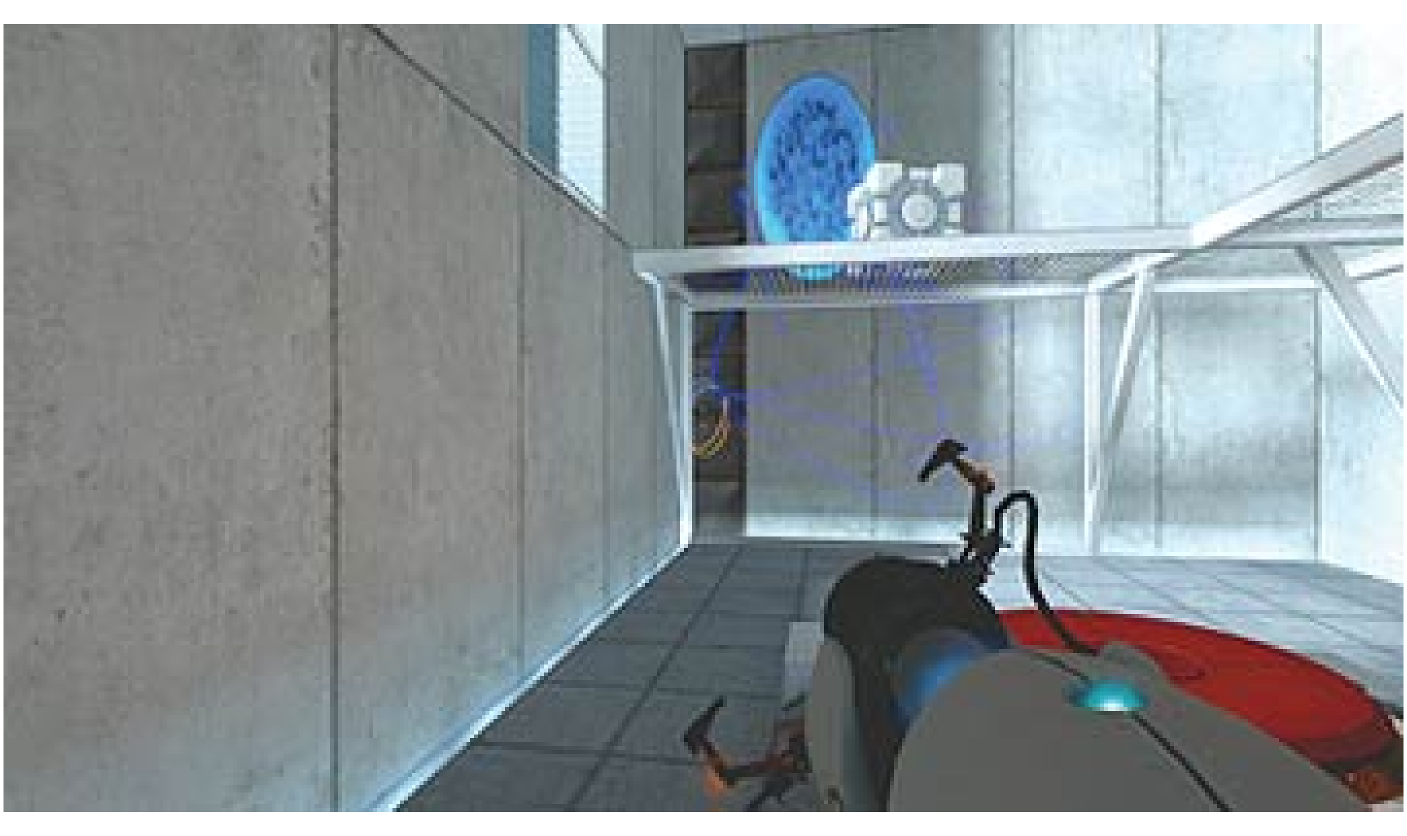


The Wedge Fling has propelled you to the last surface you need to reach, which houses a Weighted Storage Cube. Grab it, drop down to the level below you, and depress the button. Wedge-fling back up to where you found the cube and exit Test Chamber 12.

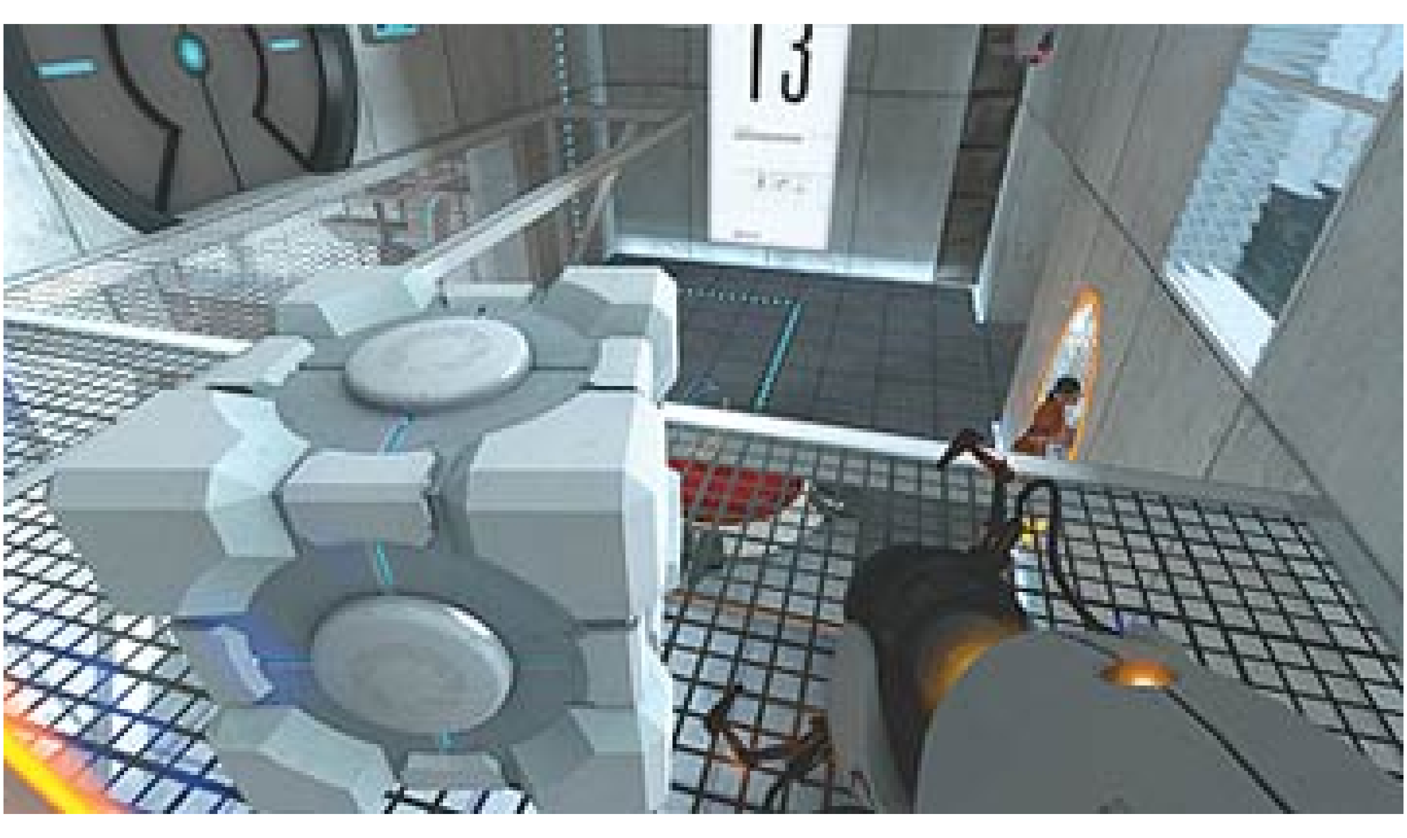
Chamber 13

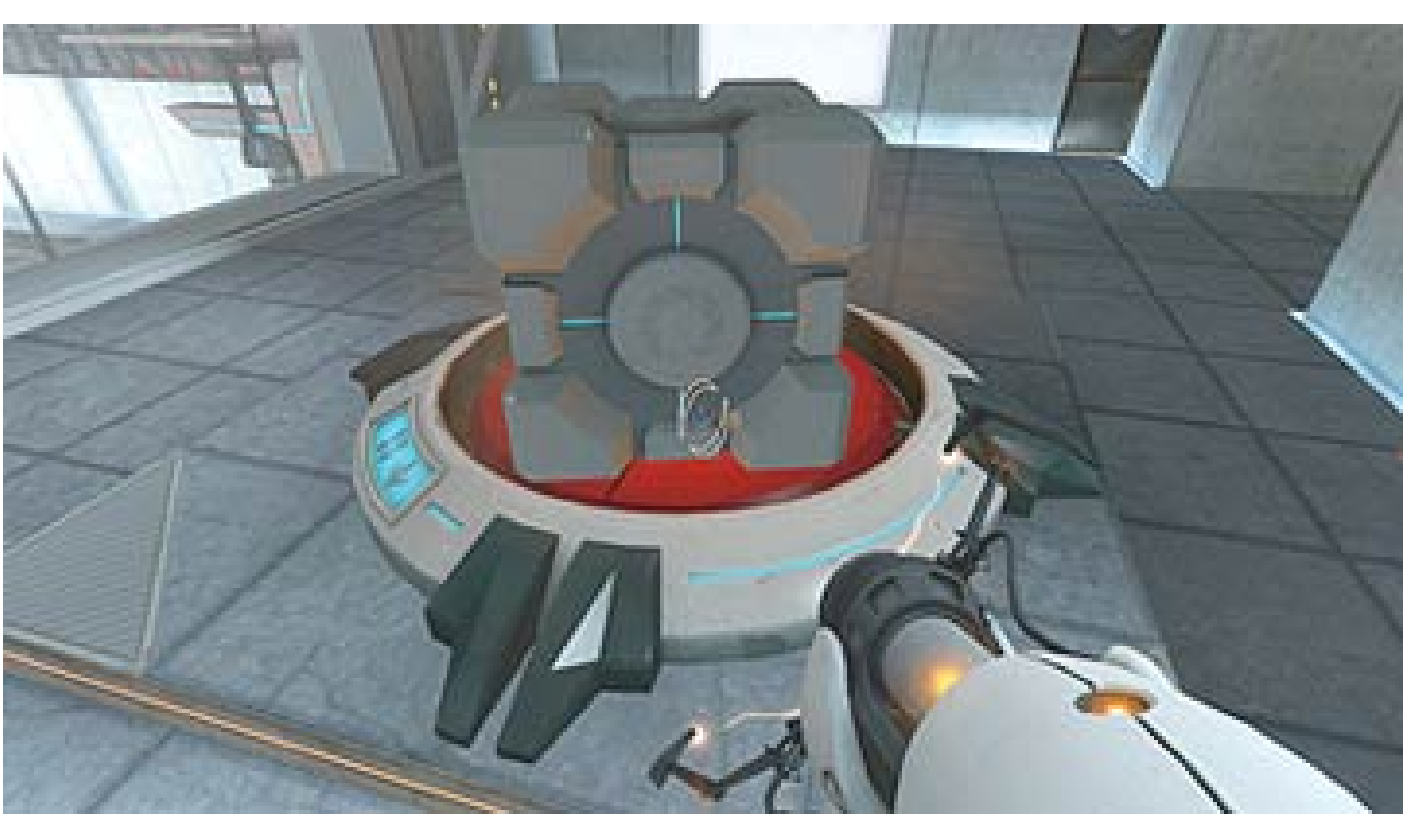


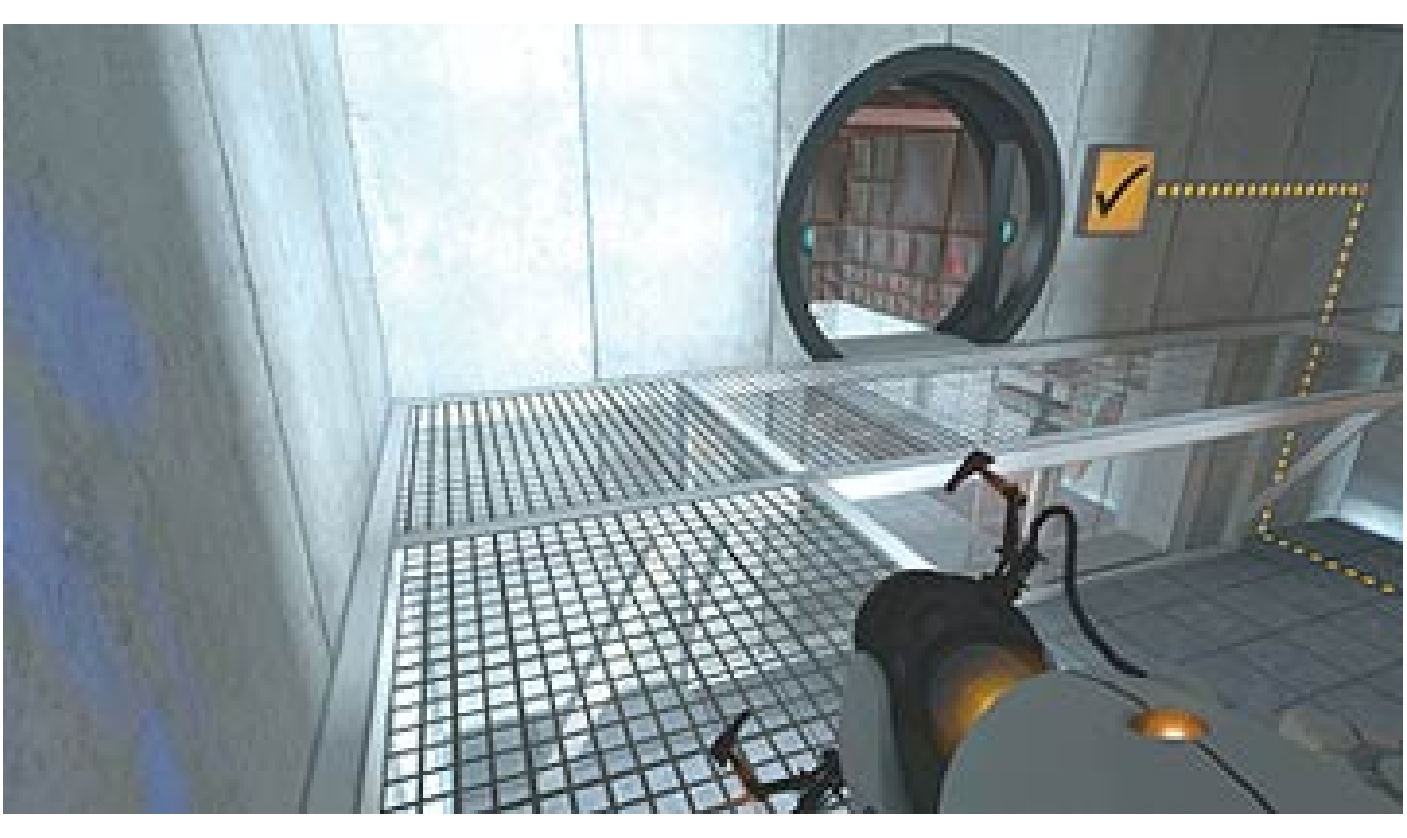
Map Legend
1. Start Point
2. End Point



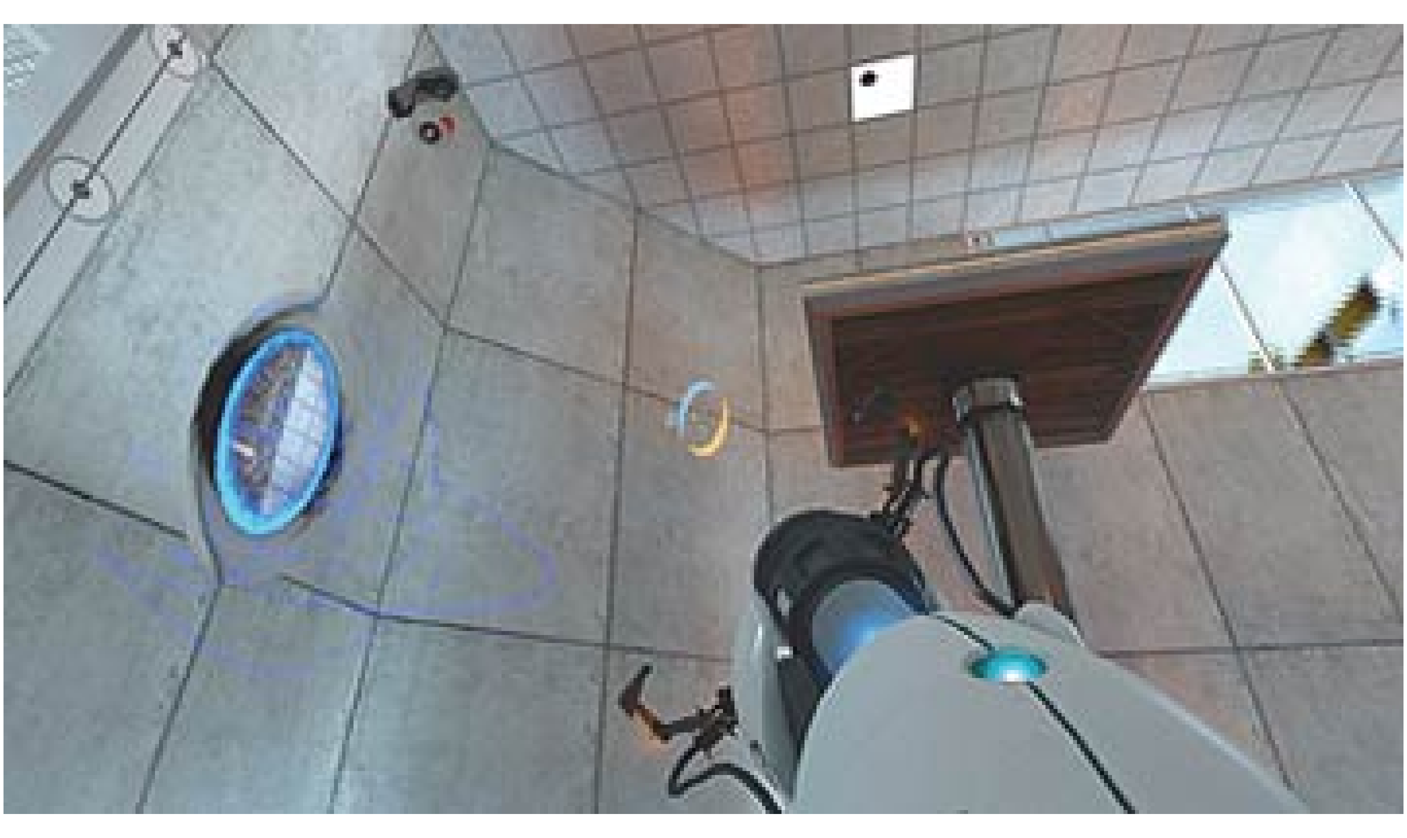
When you enter Test Chamber 13, immediately place your first portal on the ledge above you to your left, near the Weighted Storage Cube. Place your second one anywhere that is accessible and walk through it. Grab the Cube, exit your second portal or drop down, and place the Cube on the button. The blast door on the ledge is now open; proceed through it.

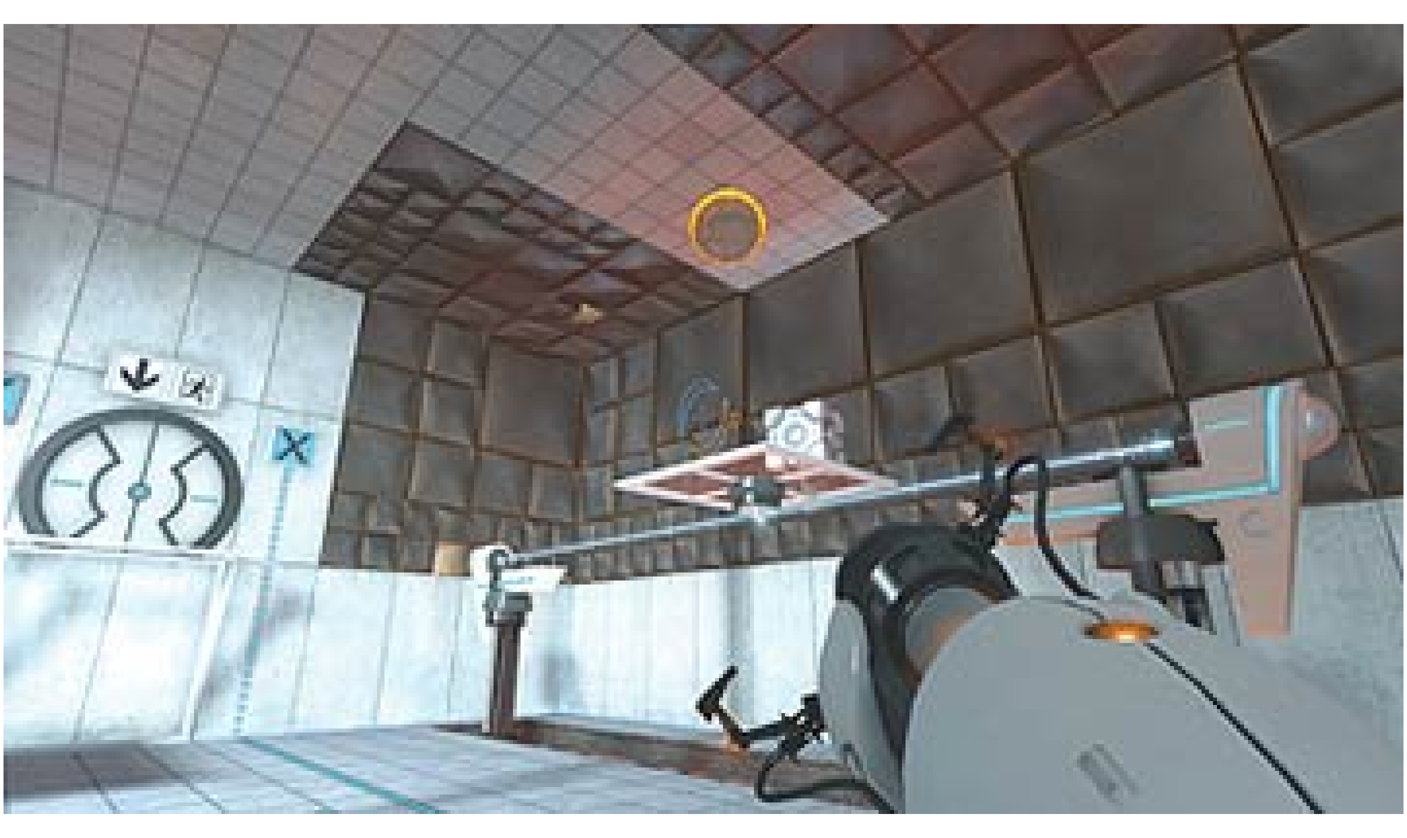


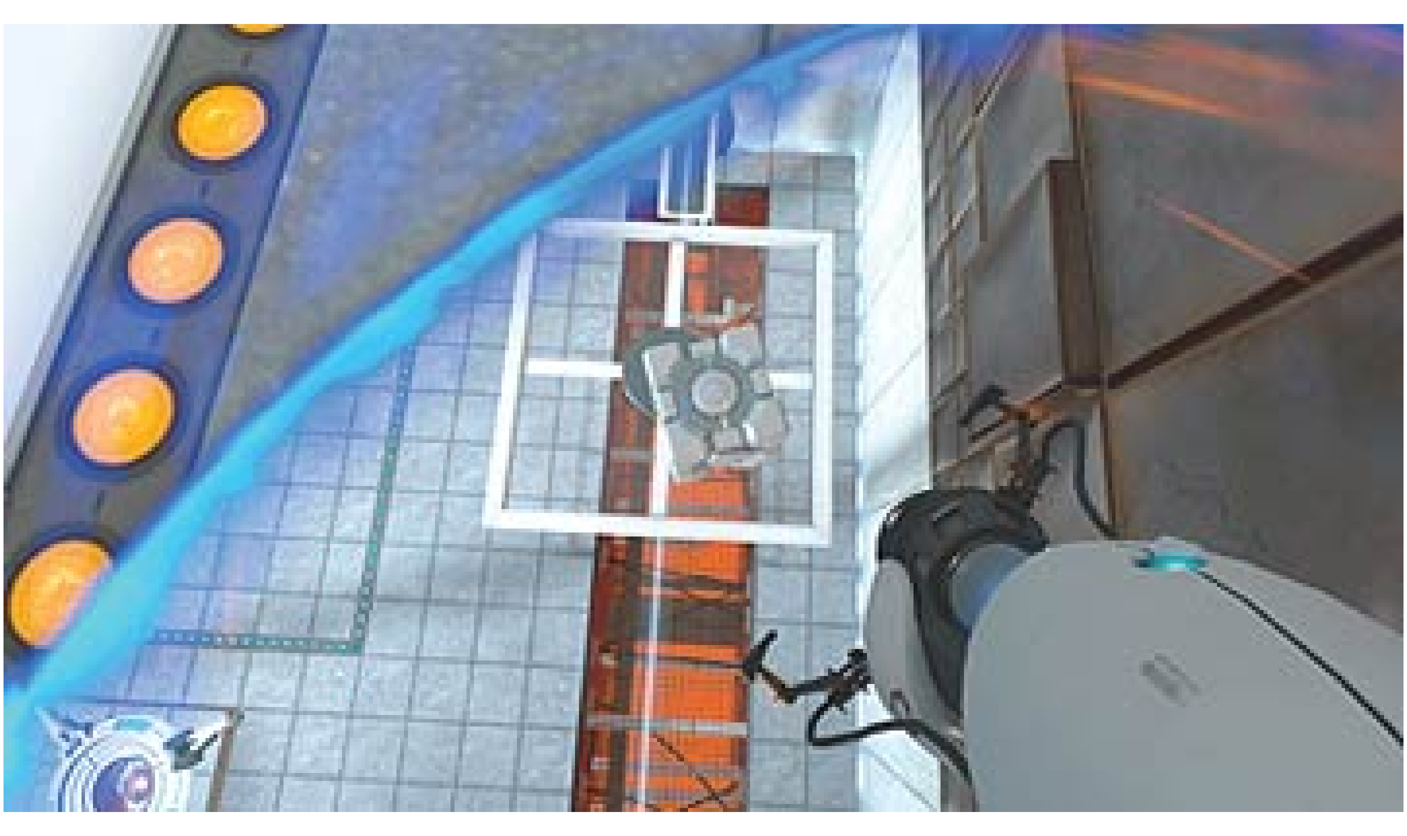




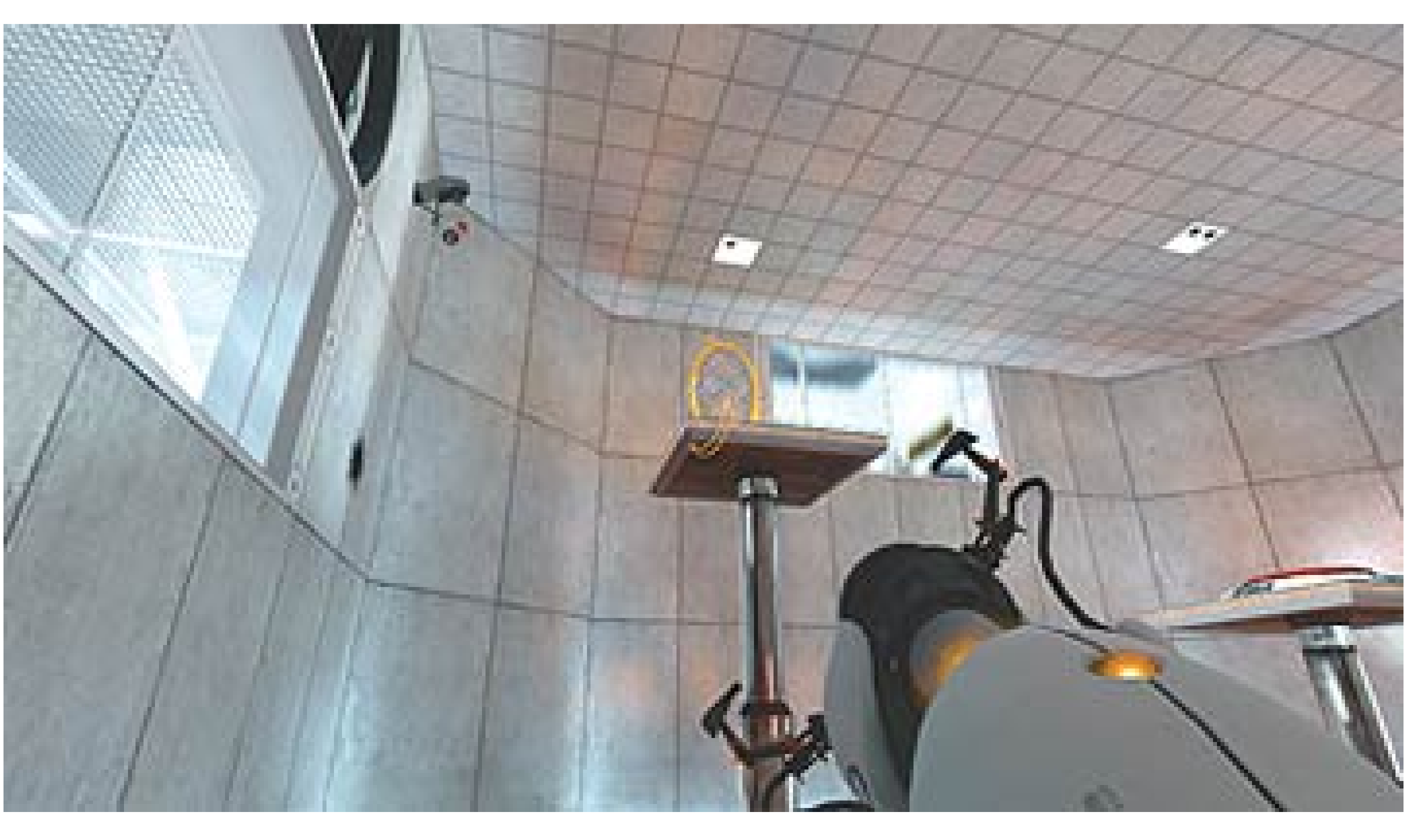
The first thing you notice in the next room is a Ball Launcher on the far wall. The Catcher is on the ground right below you. Place your first portal right above the Catcher, and your second on the blackened spot to your left where the energy ball hits the wall. The Catcher has been fed, and the horizontal lift to your right has been activated.

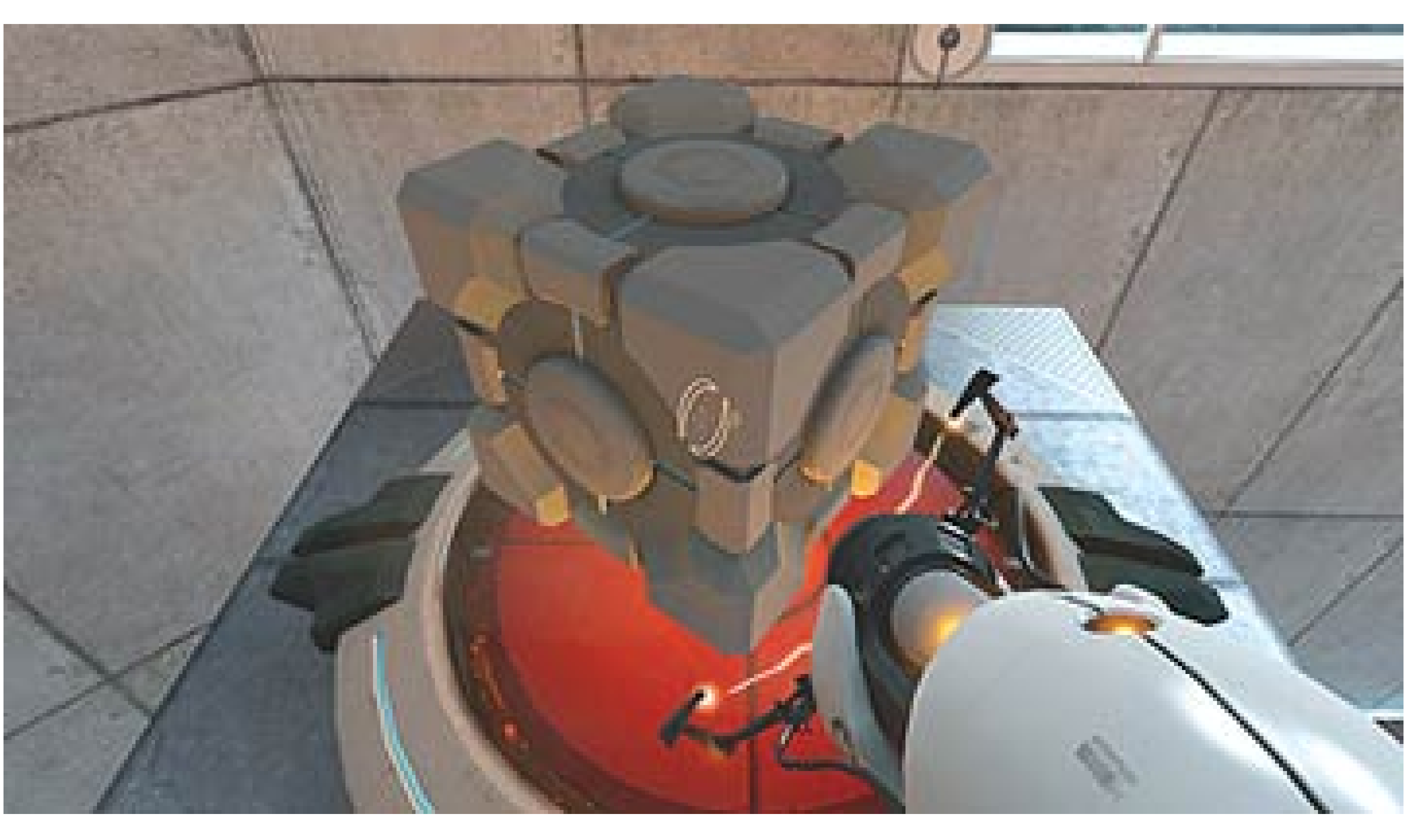




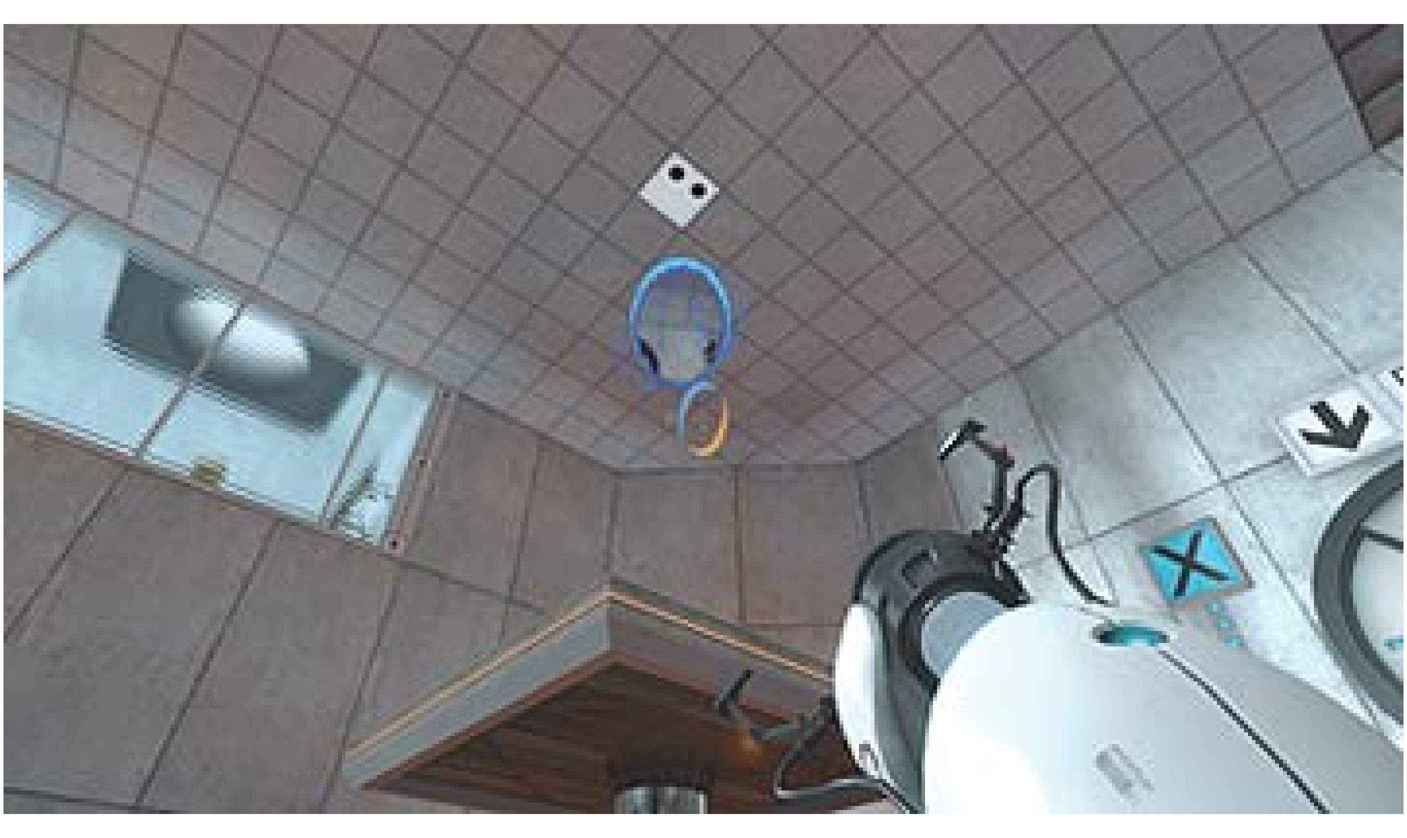


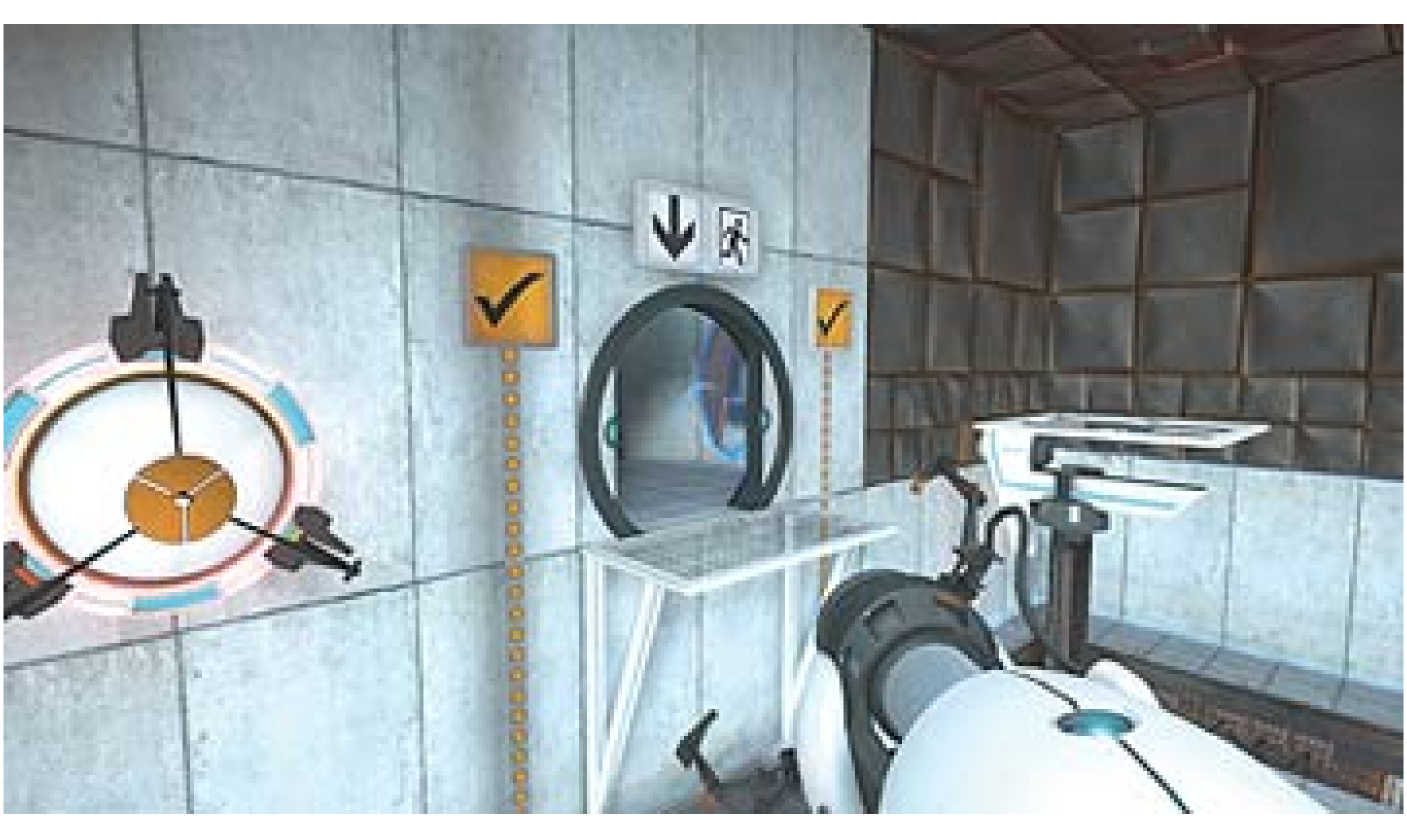
Place your first portal on the small stretch of suitable real estate midway through the lift's path. Your second portal can go anywhere, though it helps if you can peek through it. When you see the lift traveling below your first portal, jump through, grab the Weighted Storage Cube that's on it, and jump off with it in tow.





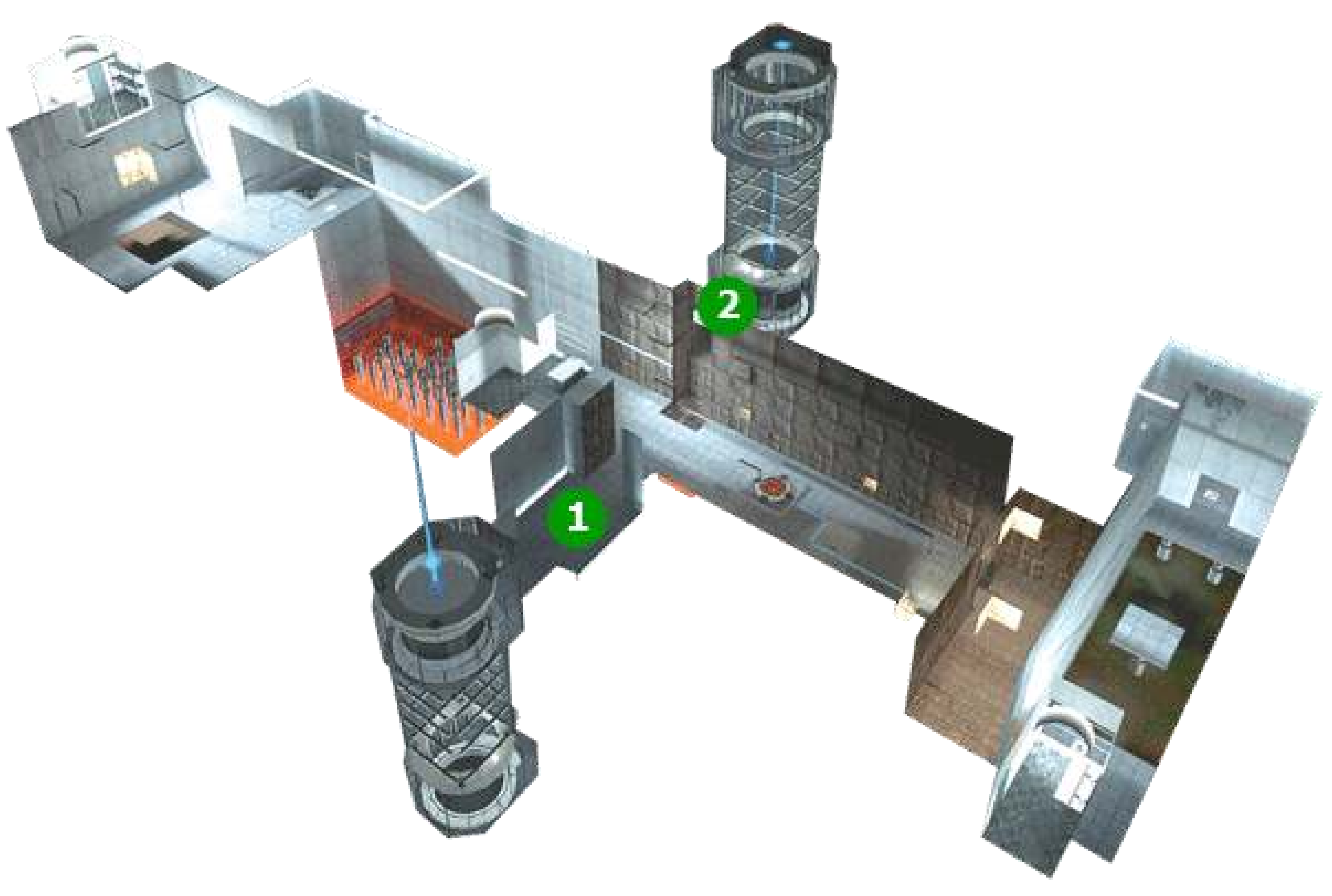
Now, place your first portal above the second, shorter platform. Go in your second portal and land atop the red button. With your weight depressing the button, you don't need to go back into the first room to retrieve the Cube; simply place your first portal behind the open blast doors, retreat through your second, and you're at the exit grid.



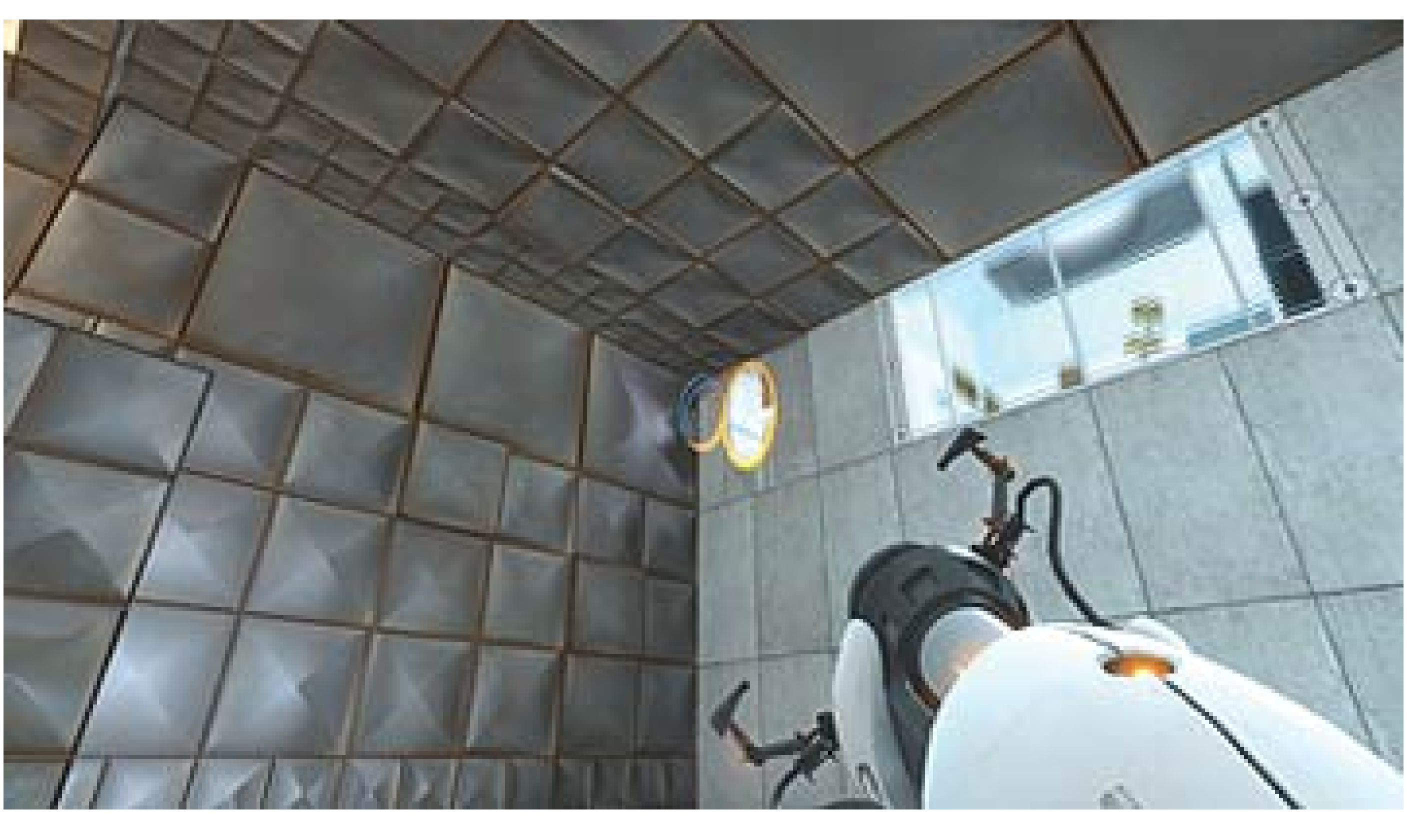


Test Chambers

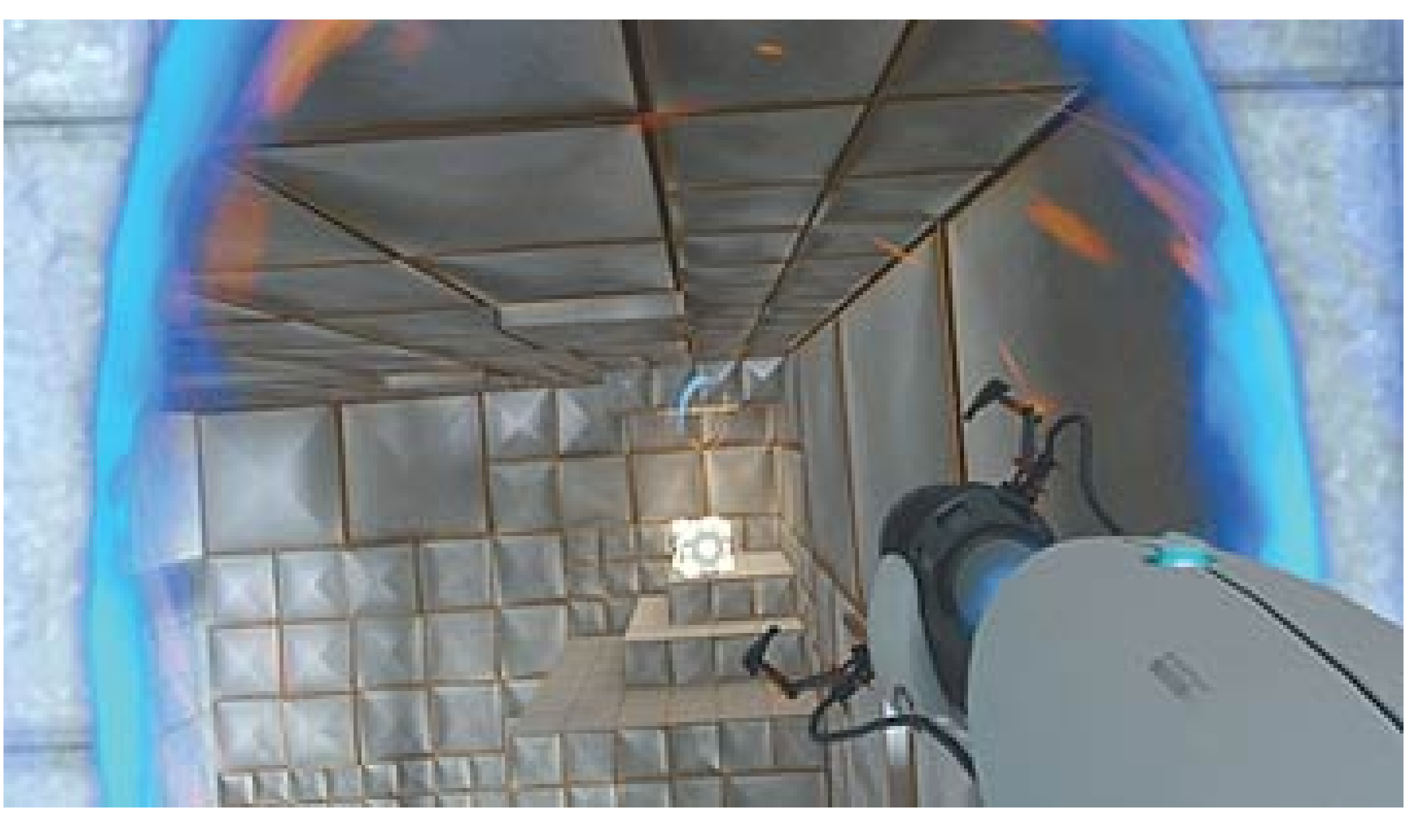
Chamber 14



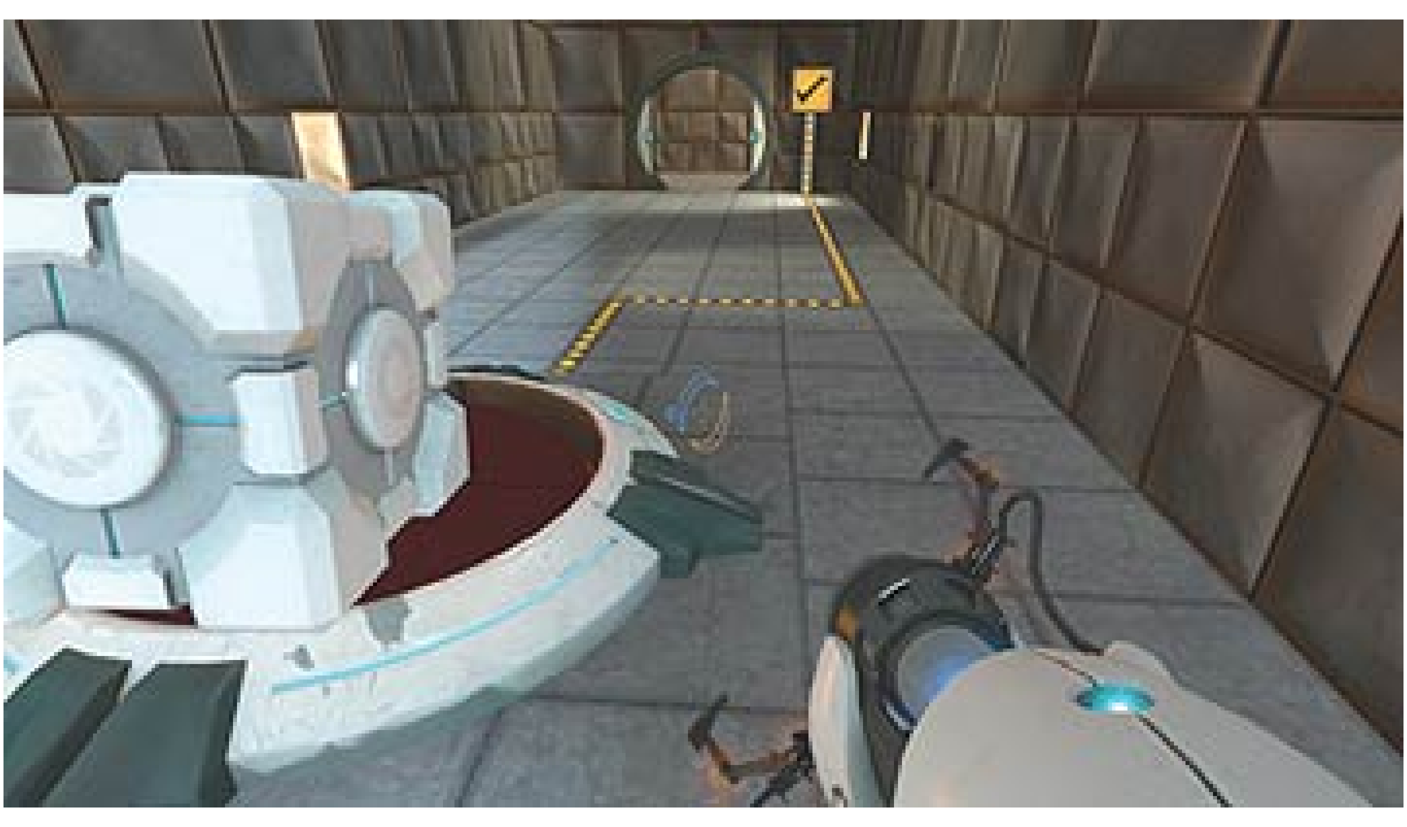
Map Legend
1.Chamber 14 Start Point
2.Test Chamber

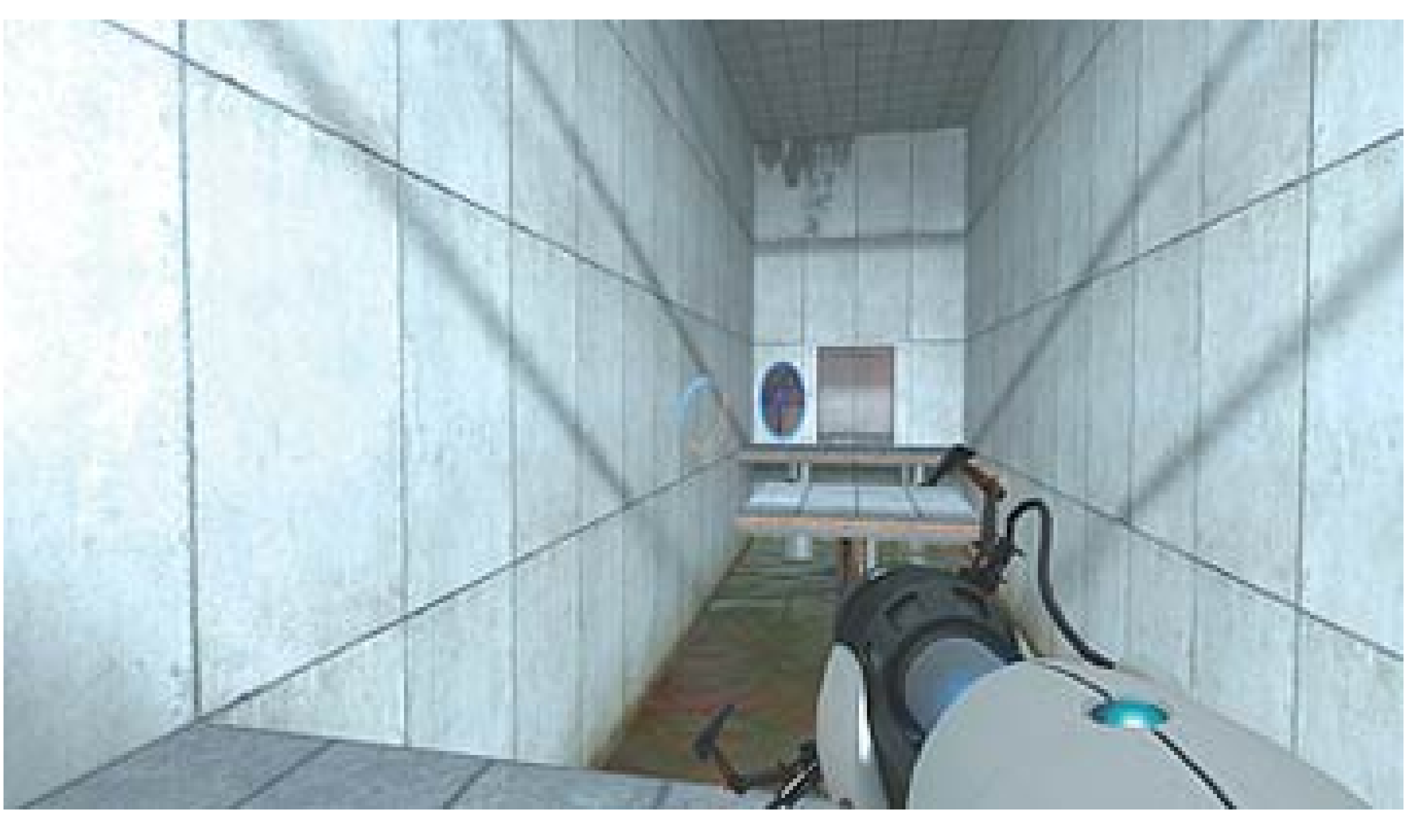


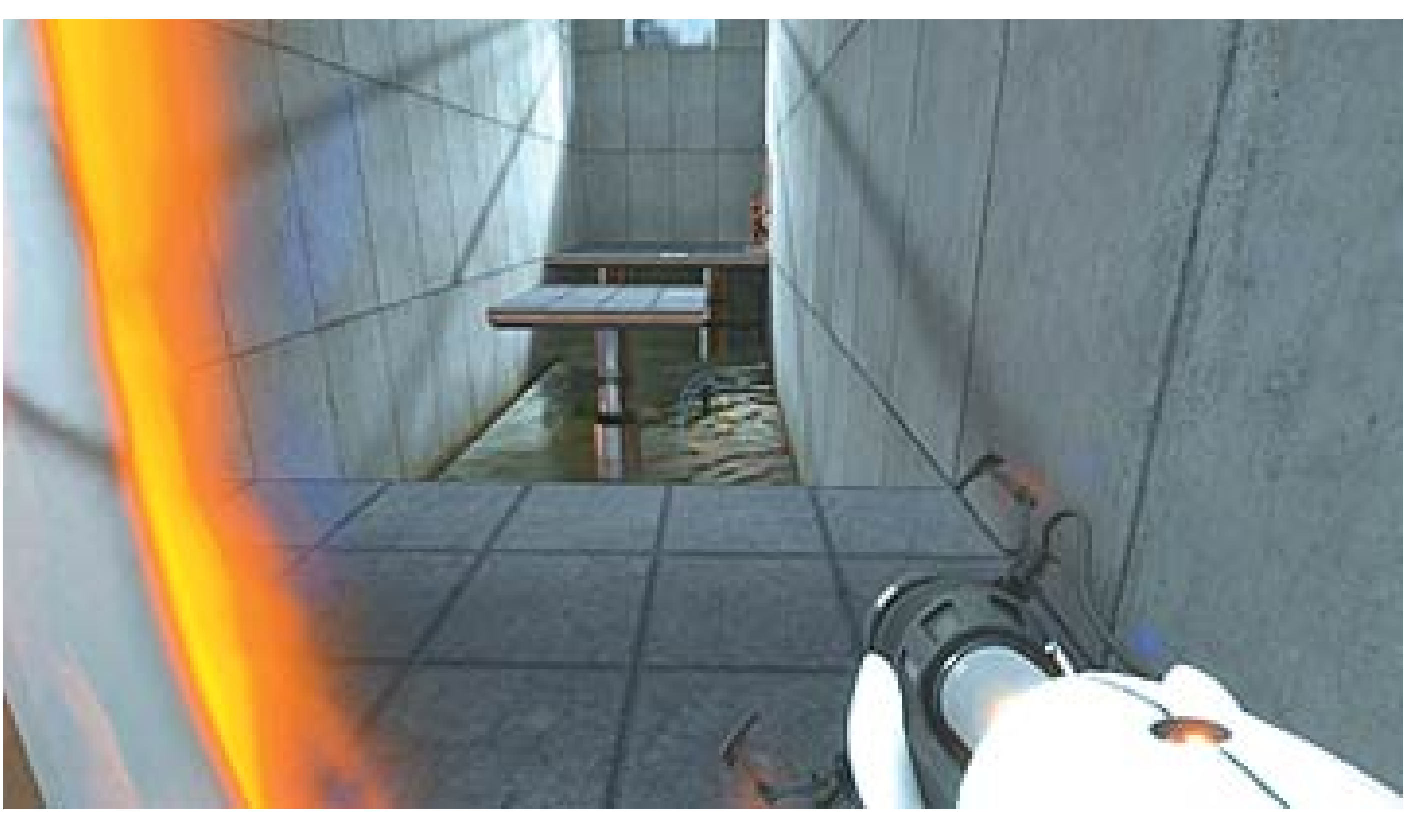
As you exit the elevator in Test Chamber 14, turn left at the end of the hall. Some stairs emerge from the pit ahead of you. Climb them. After you reach the top, they retract. This is fine—that pit will come in handy momentarily. Walk past the Ball Catcher, and notice the Weighted Storage Cube atop the ledge. Since you can't place a portal on any of those surfaces, you have to place one on the wall opposite the Cube, near the observation window. Place your second portal at the bottom of the pit, and fling to the Cube.



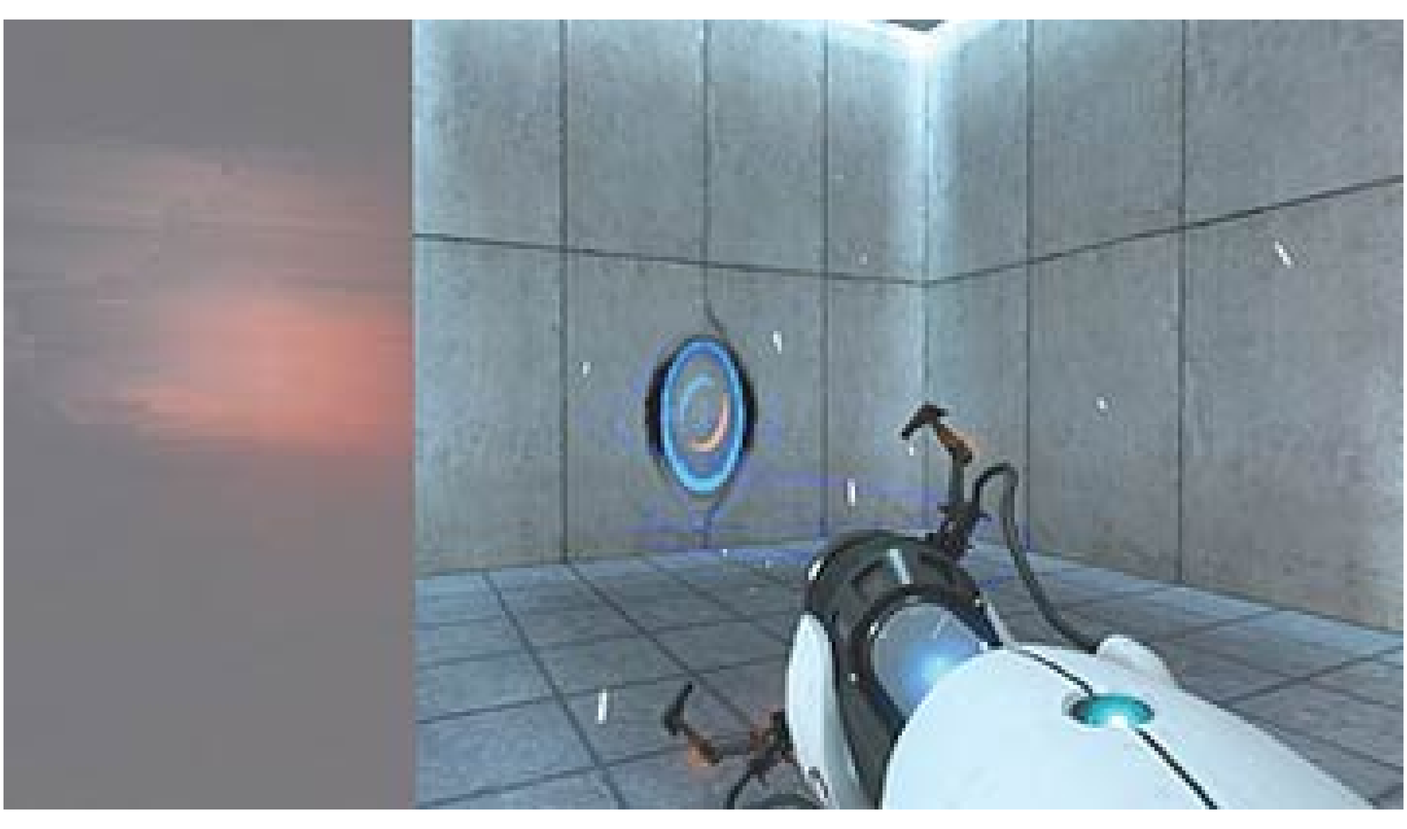
Now that you've got the Cube, walk back to a pit and climb down the stairs when they emerge. Place the Cube on the red button down the hall and enter the blast doors that just opened.

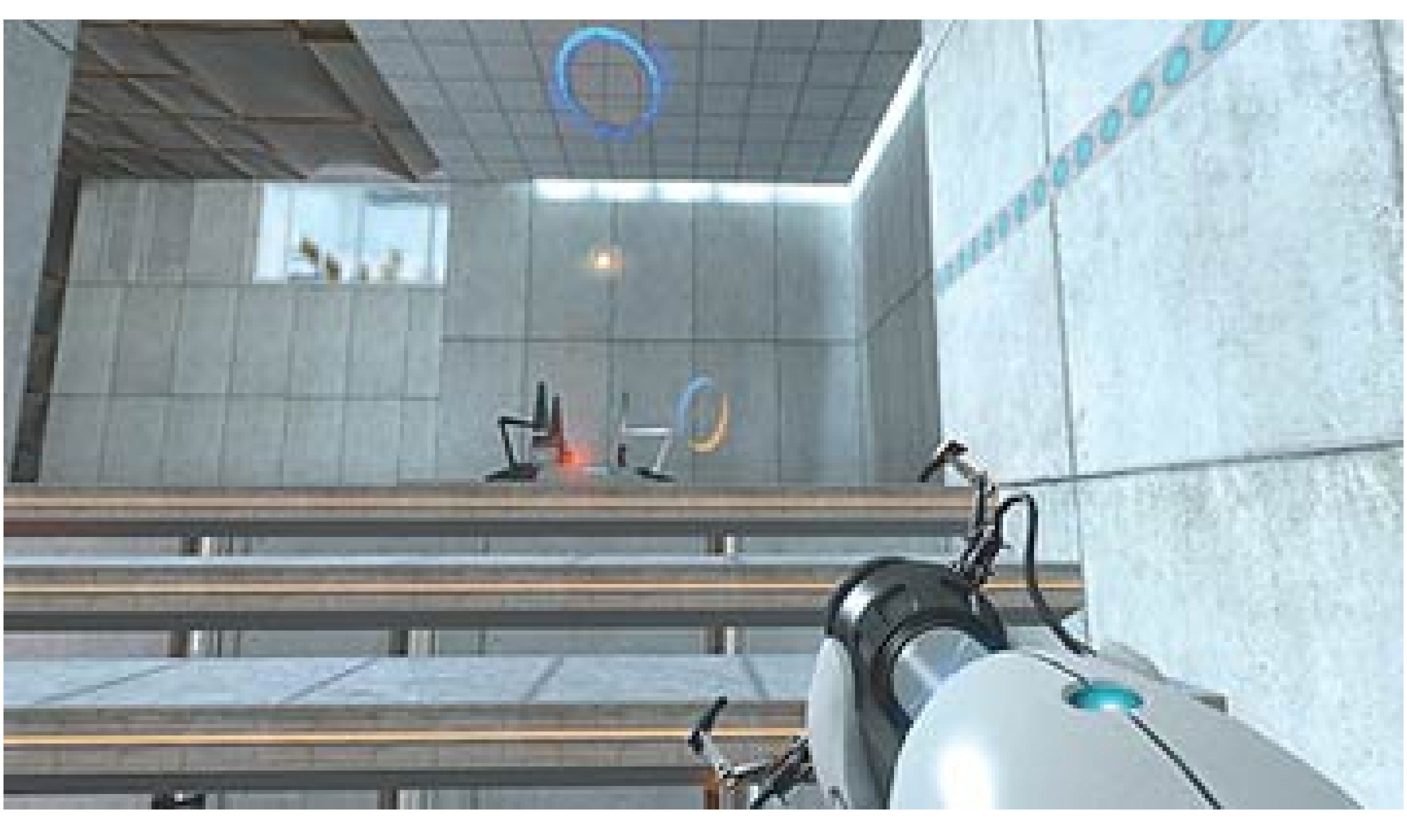




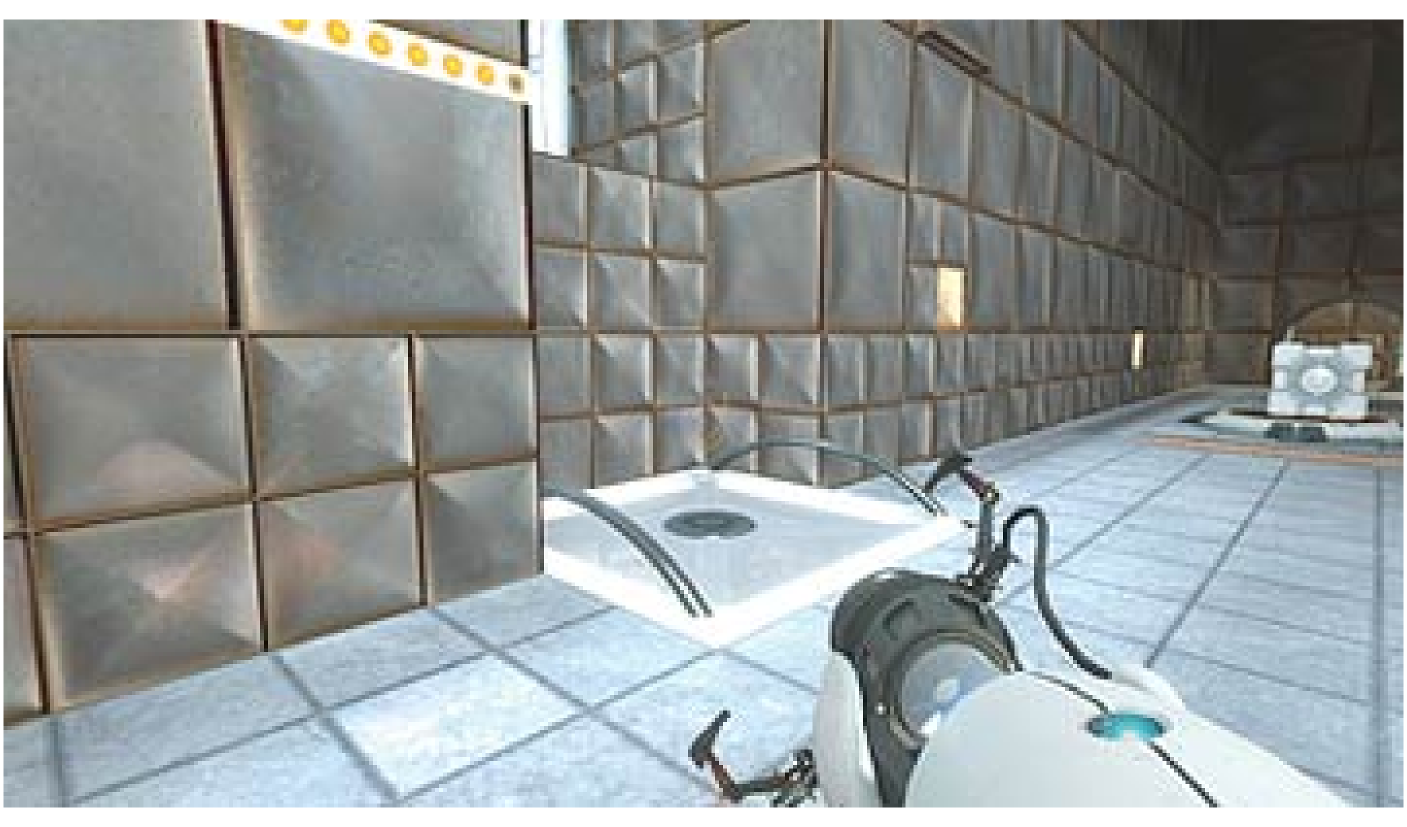


Beyond the door is a hallway featuring a goo pit with a stationary platform between two lifts that periodically ascend and descend. Ignore these for now, and aim a portal at the far end of the hallway. Place your second portal near you and walk through. Enter the room at the end of the hall.



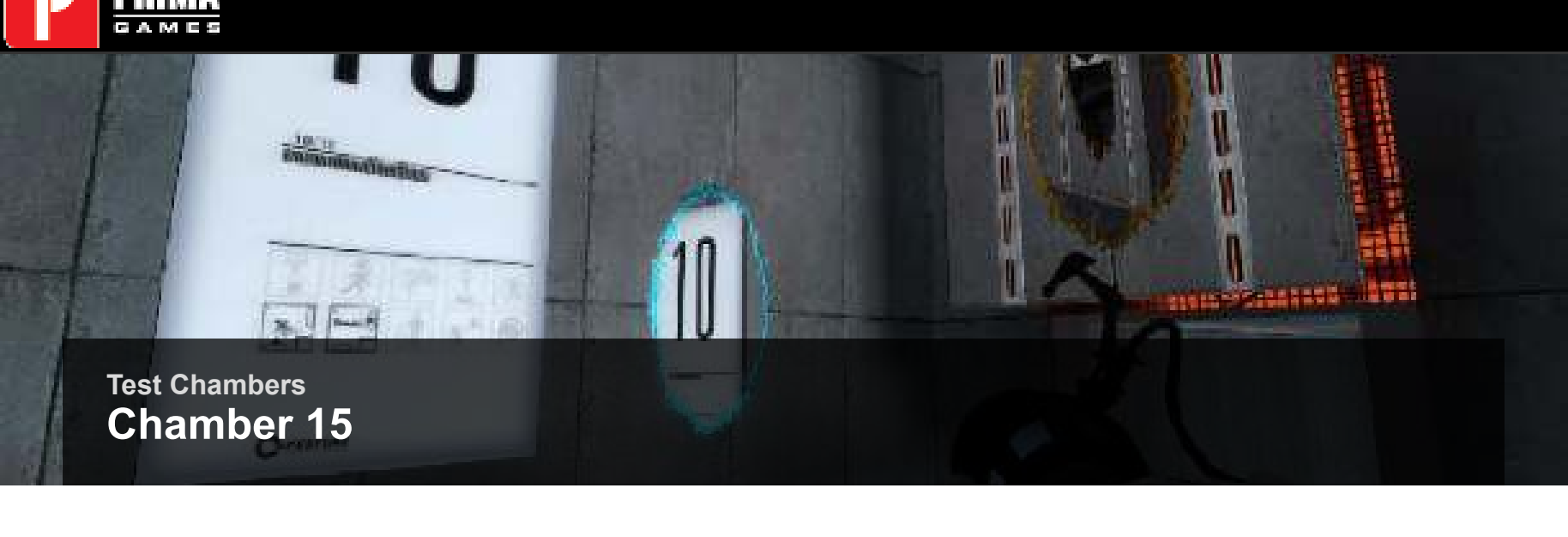


You are now in disturbing proximity to a Ball Launcher and its lethal projectile. You no doubt want to get out of here ASAP, so place a portal on the charred spot on the wall where the ball makes contact. No portal trickery works in the goo-filled hallway this time, unfortunately. Just carefully jump from platform to platform, run back to the first room, go up the stairs, and place a portal on the ceiling above the Ball Catcher that you passed on your way to retrieve the Cube.



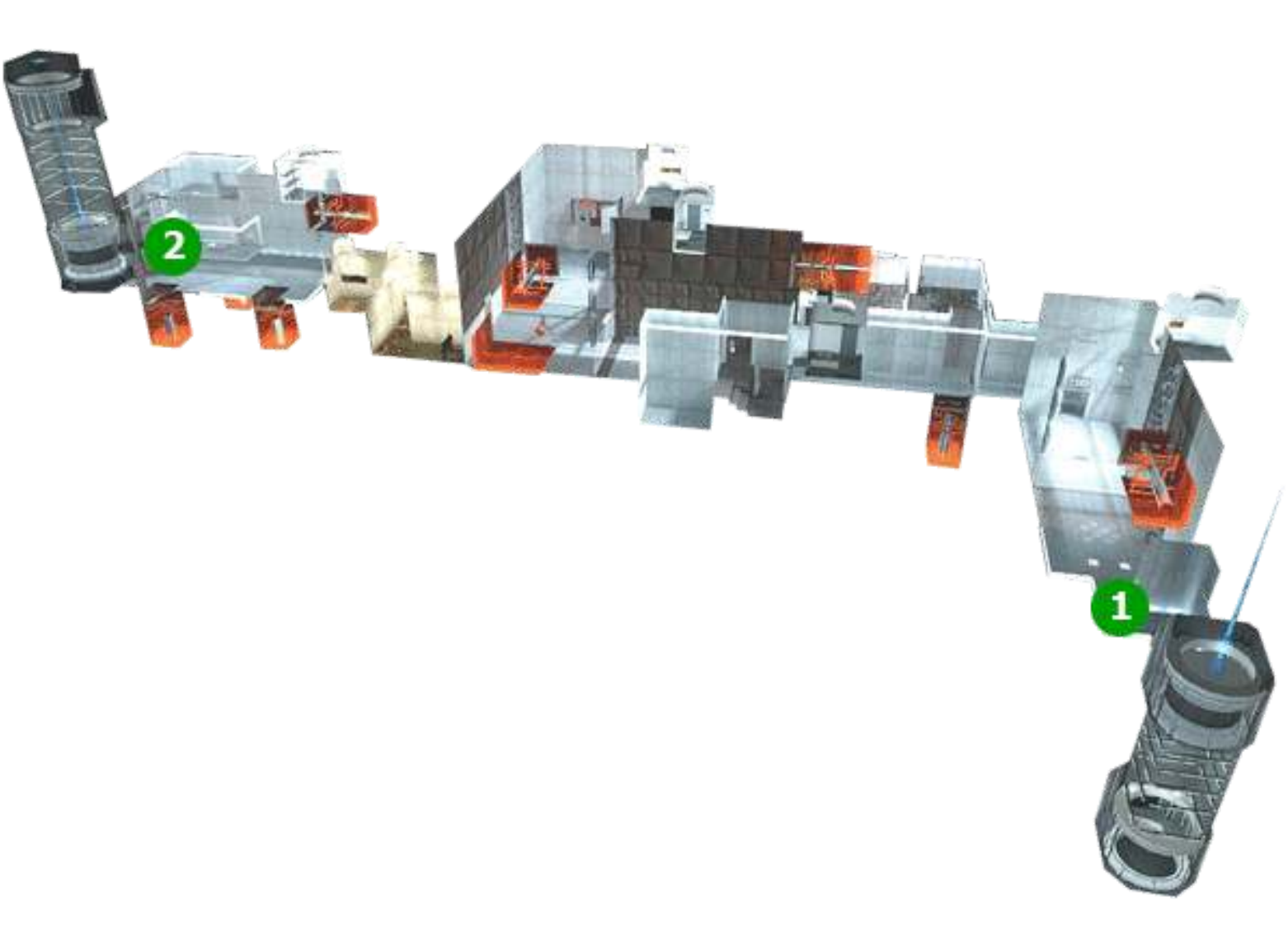
You have just activated the lift to the exit of Test Chamber 14. Vacate the premises at your leisure.

Remember to try The Advanced and Portal Challenge Strategies

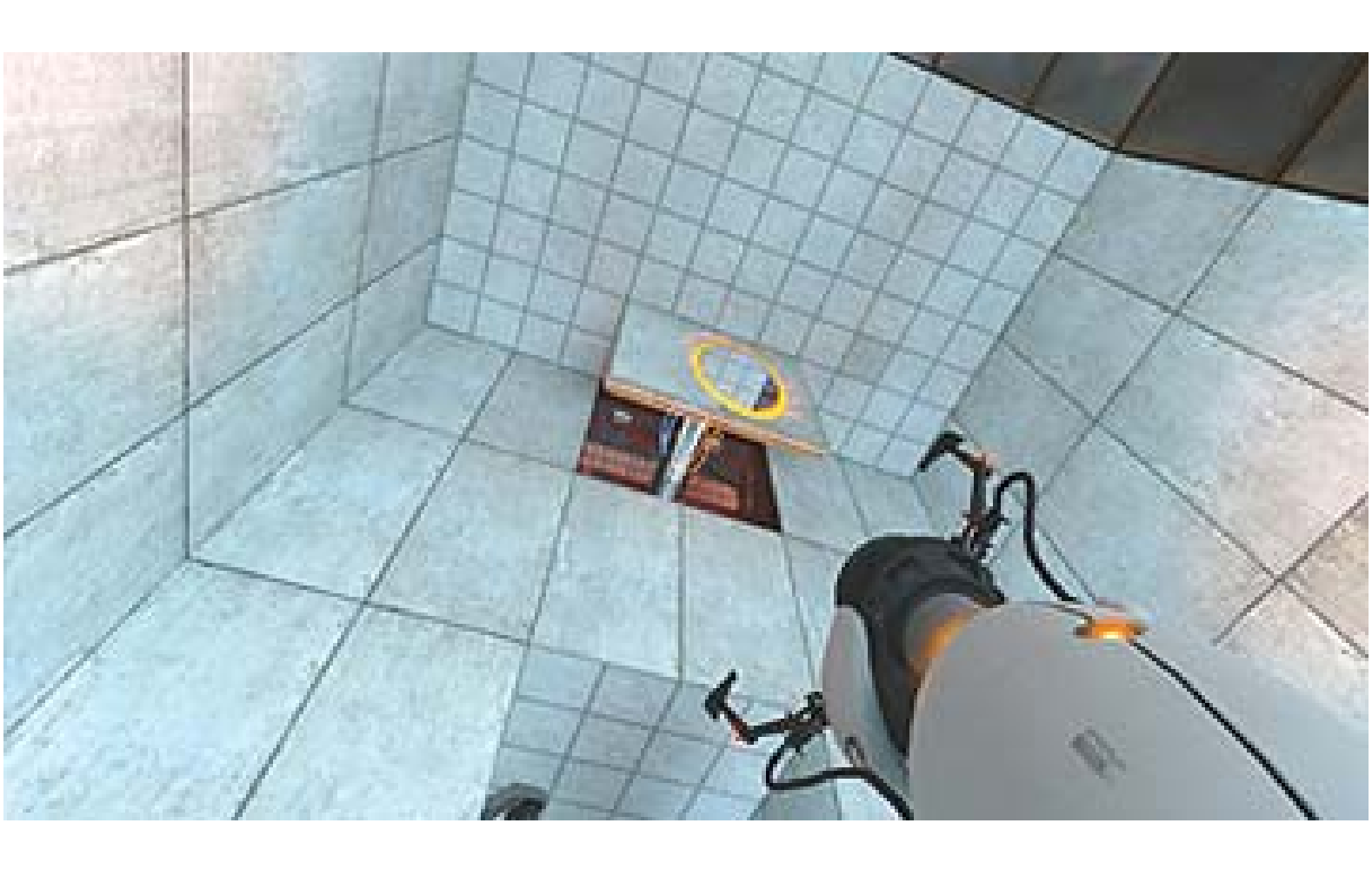


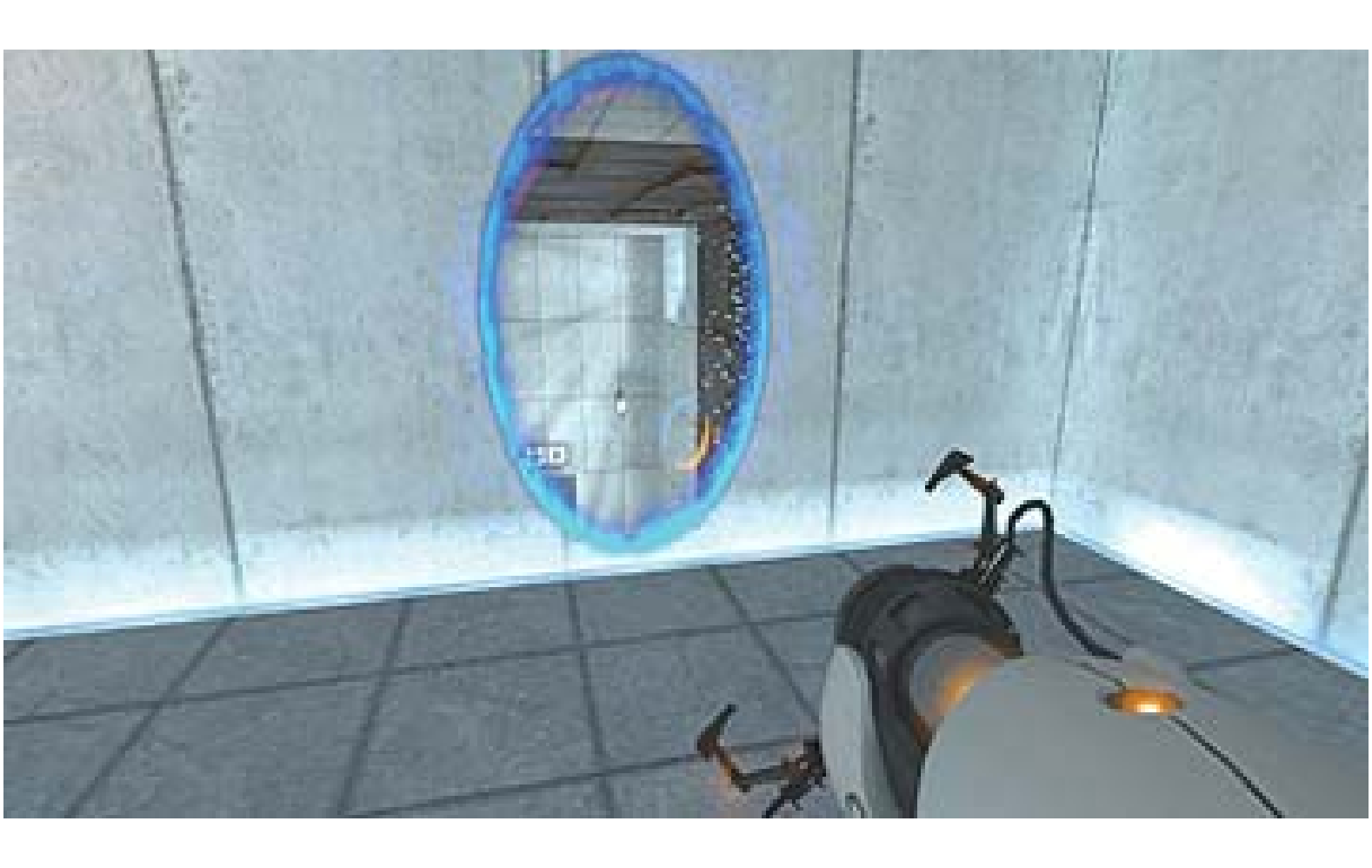
Test Chambers

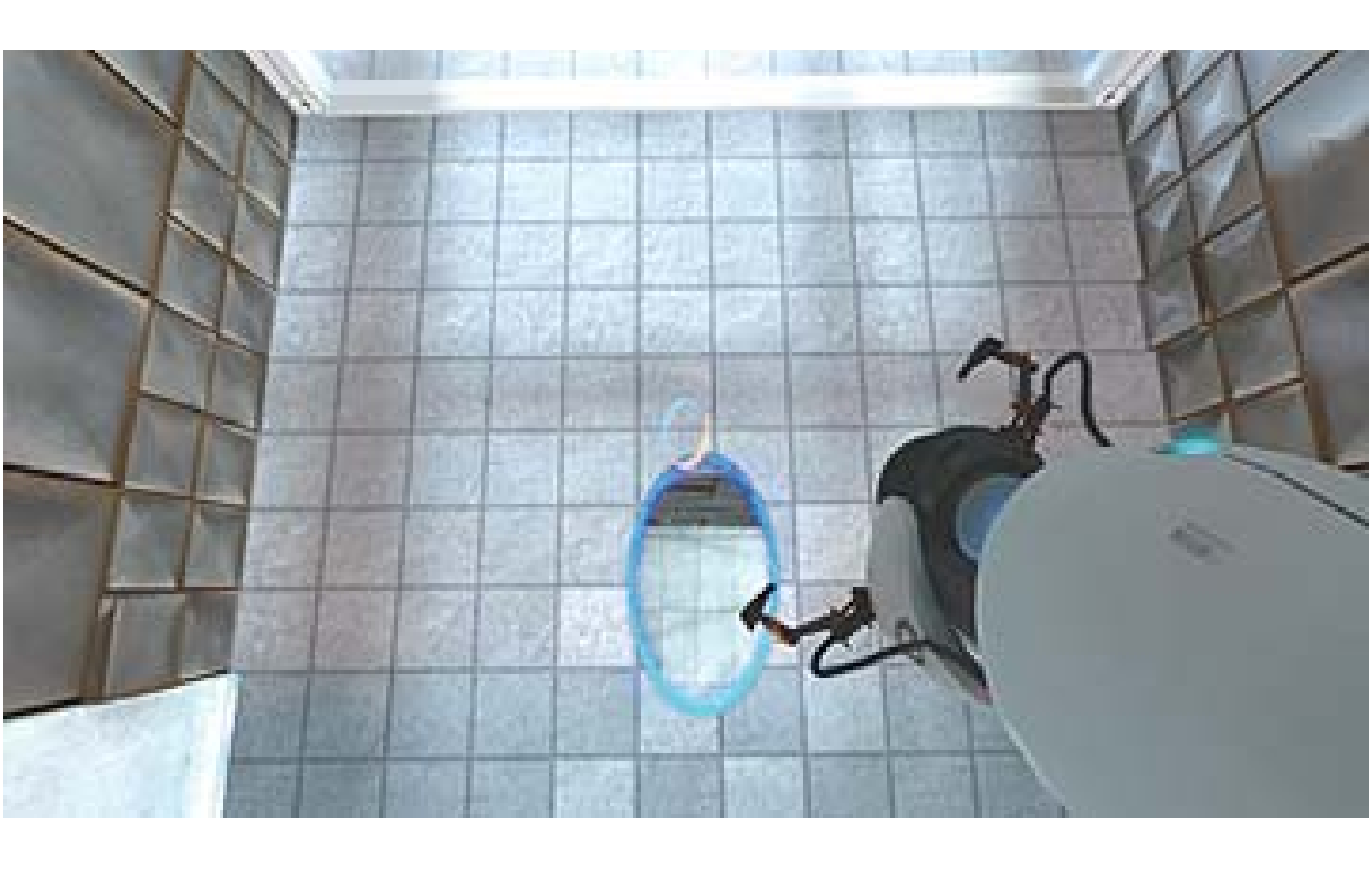
Chamber 15



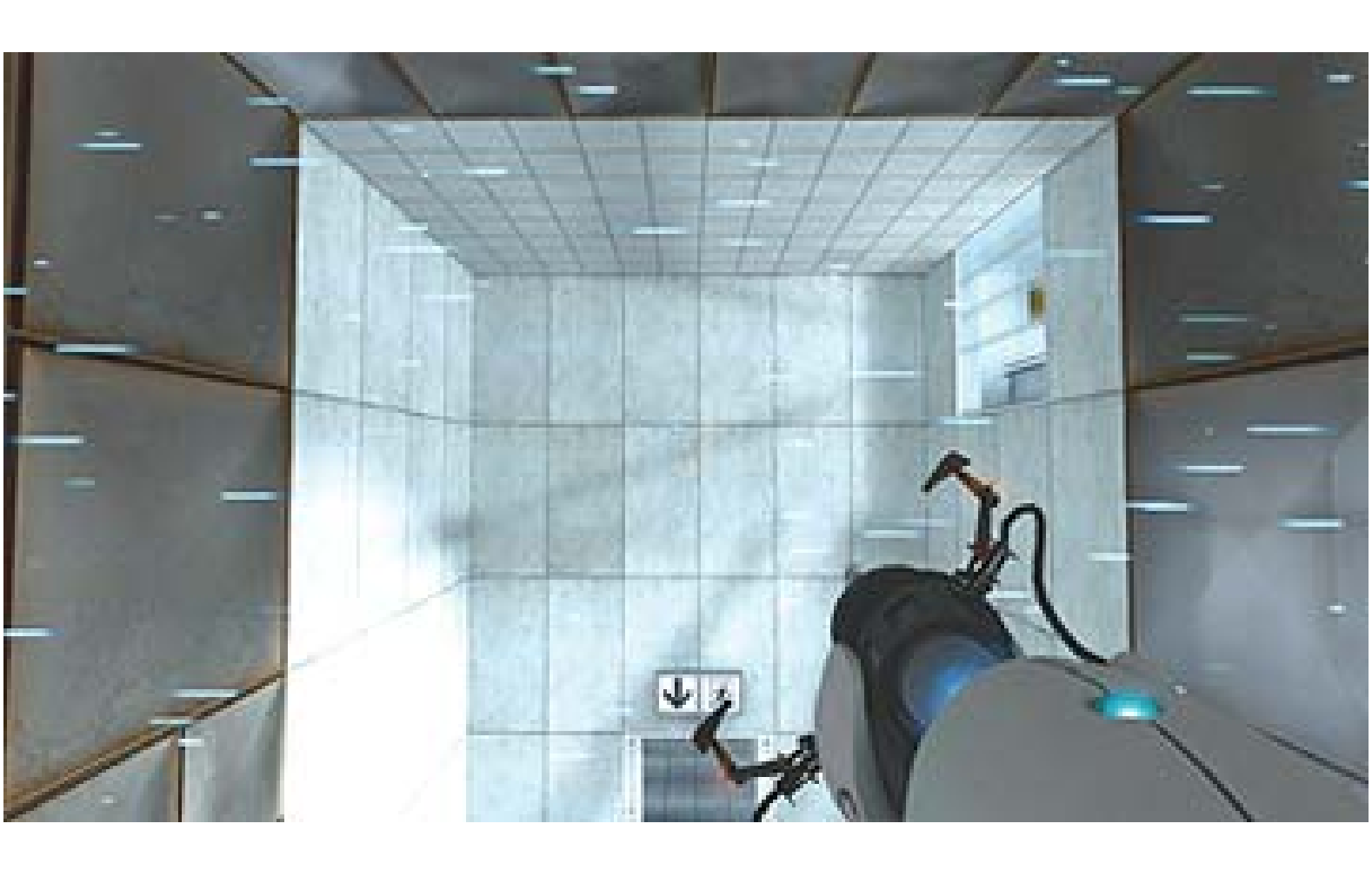
Map Legend
1.Test Chamber 15 Start Point
2.Test Chamber 15 End Point

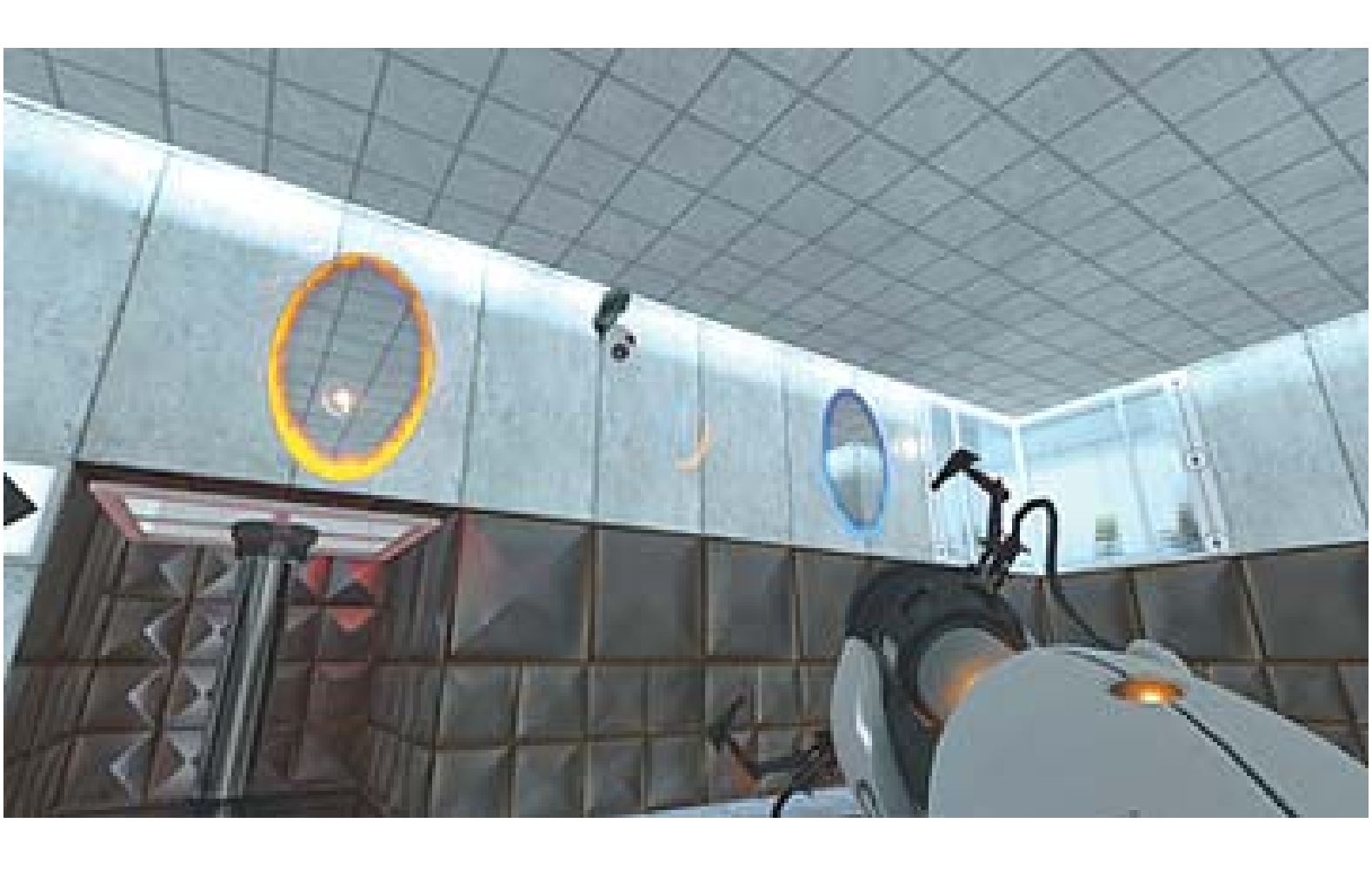




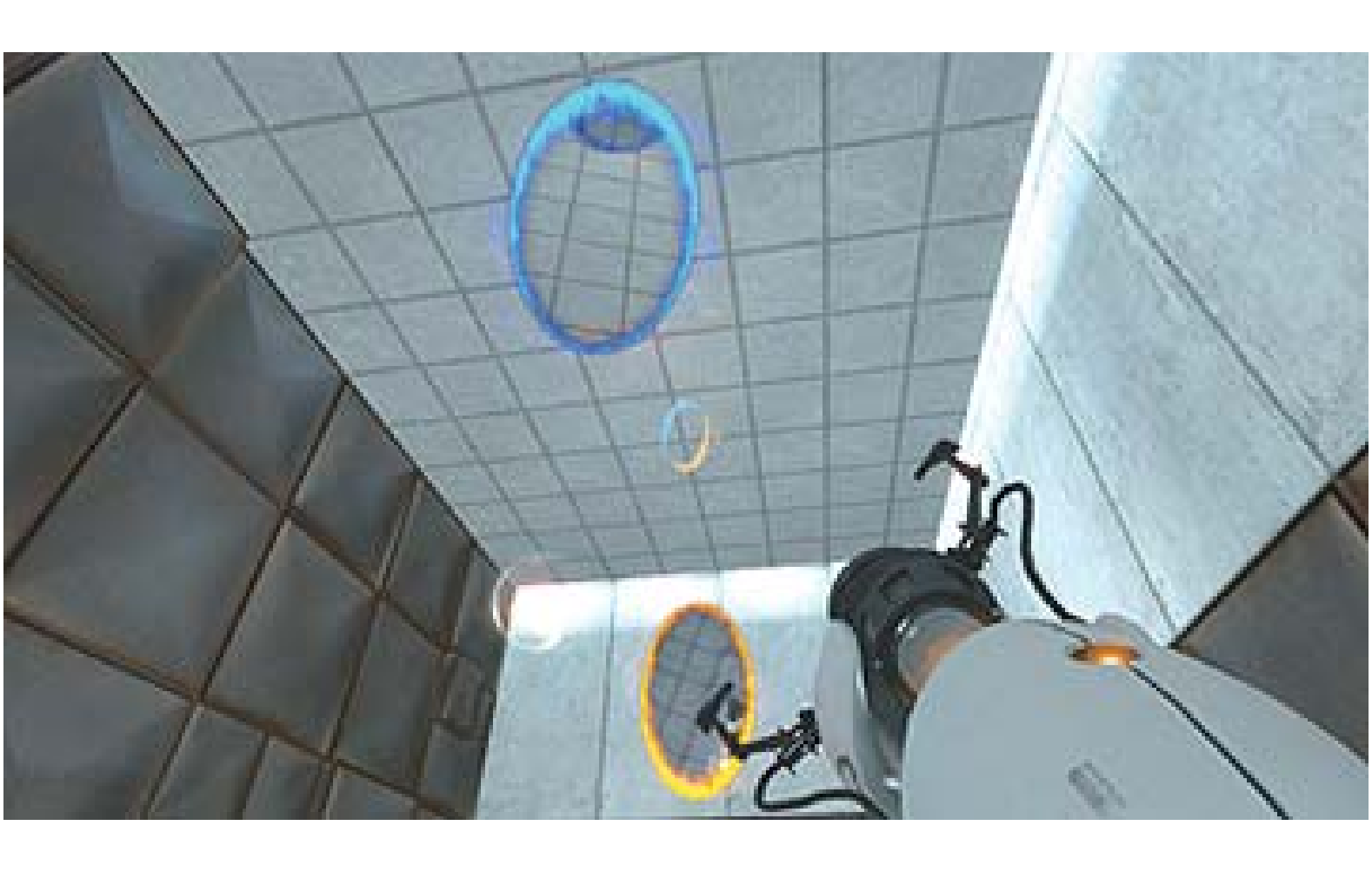


After you emerge from the entrance hallway, the first thing you see is a big old Material Emancipation Grid issuing from a wall that's too tall to jump over. No matter—you're going to execute a Double Fling over it! Turn 180-degrees and place your first portal on the protruding panel that's high up on the wall. Place your second portal anywhere that's accessible. Turn through it and replace it with another portal where you suspect you're going to land. You have just generated enough momentum to fly through the grid.

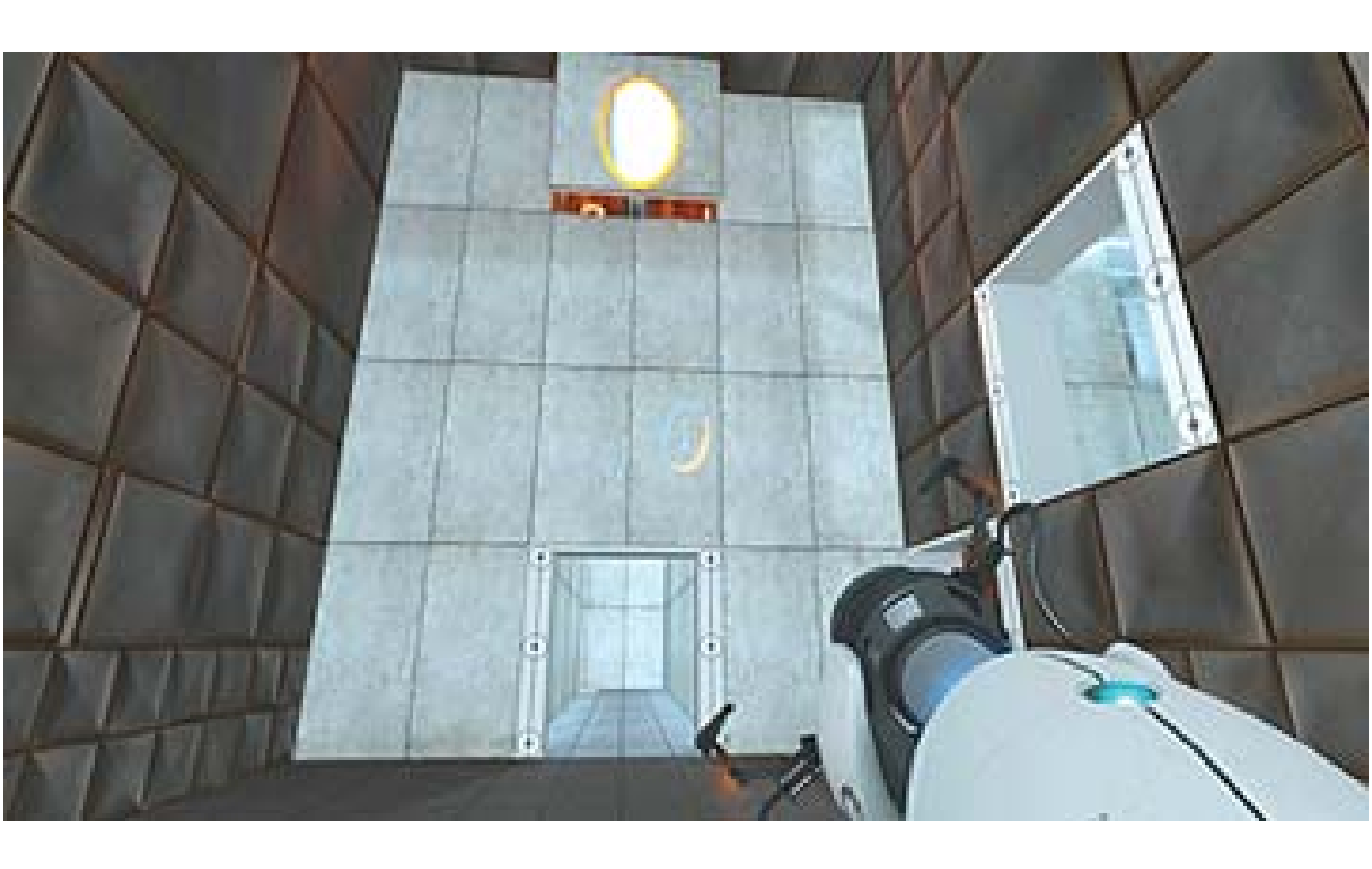


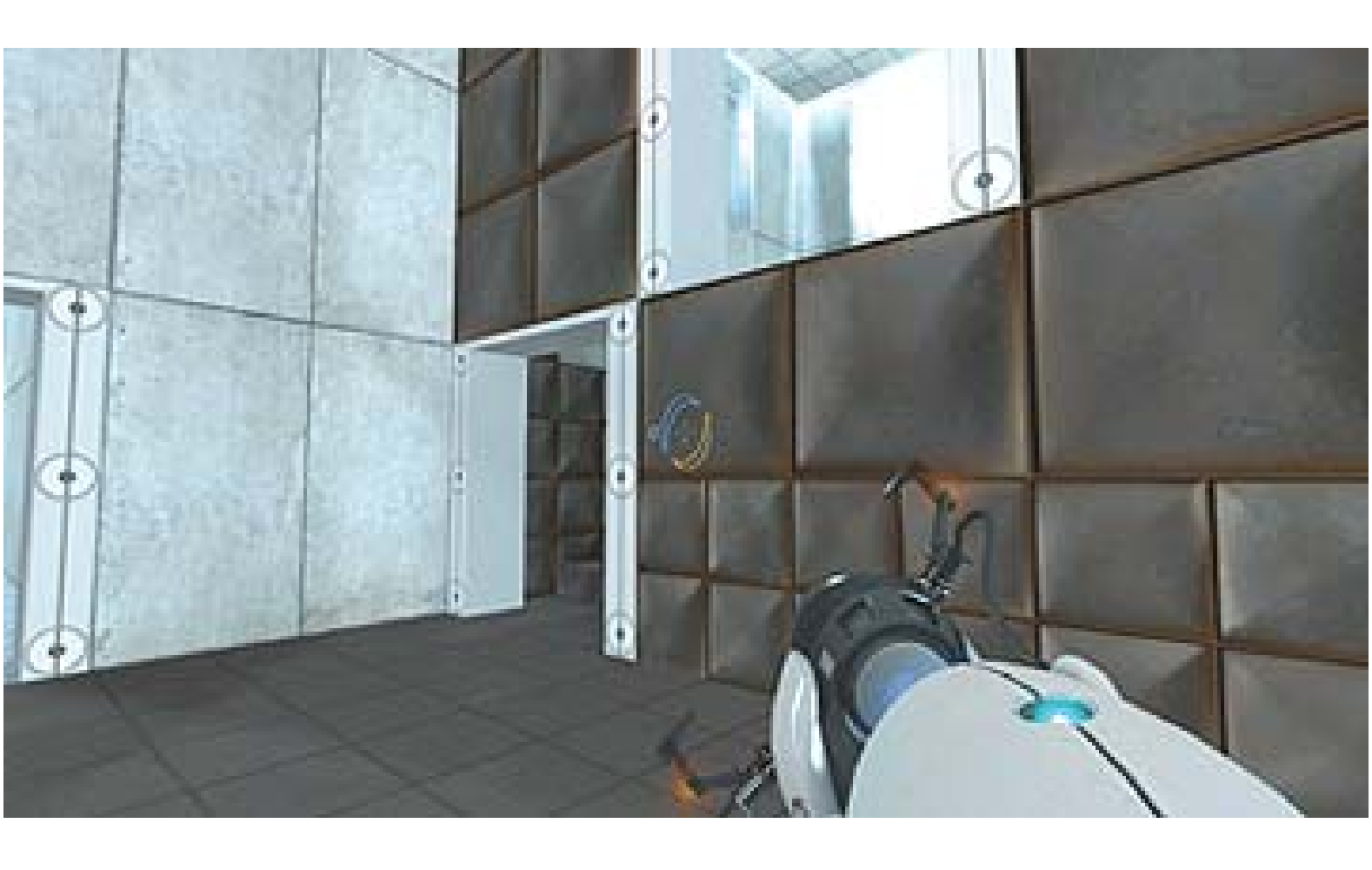


Two Material Emancipation Grids lie side by side in the next room, separated by a wall. Behind grid number one is a Ball Launcher; behind number two is a ball-hungry Catcher. Here's how you feed it: Place your first portal on the charred spot where ball makes an impact, and place your second portal about three wall panels to the left of it; use the inactive lift as a guide. The energy ball is now on its way through the grid containing the Catcher. Follow it in.

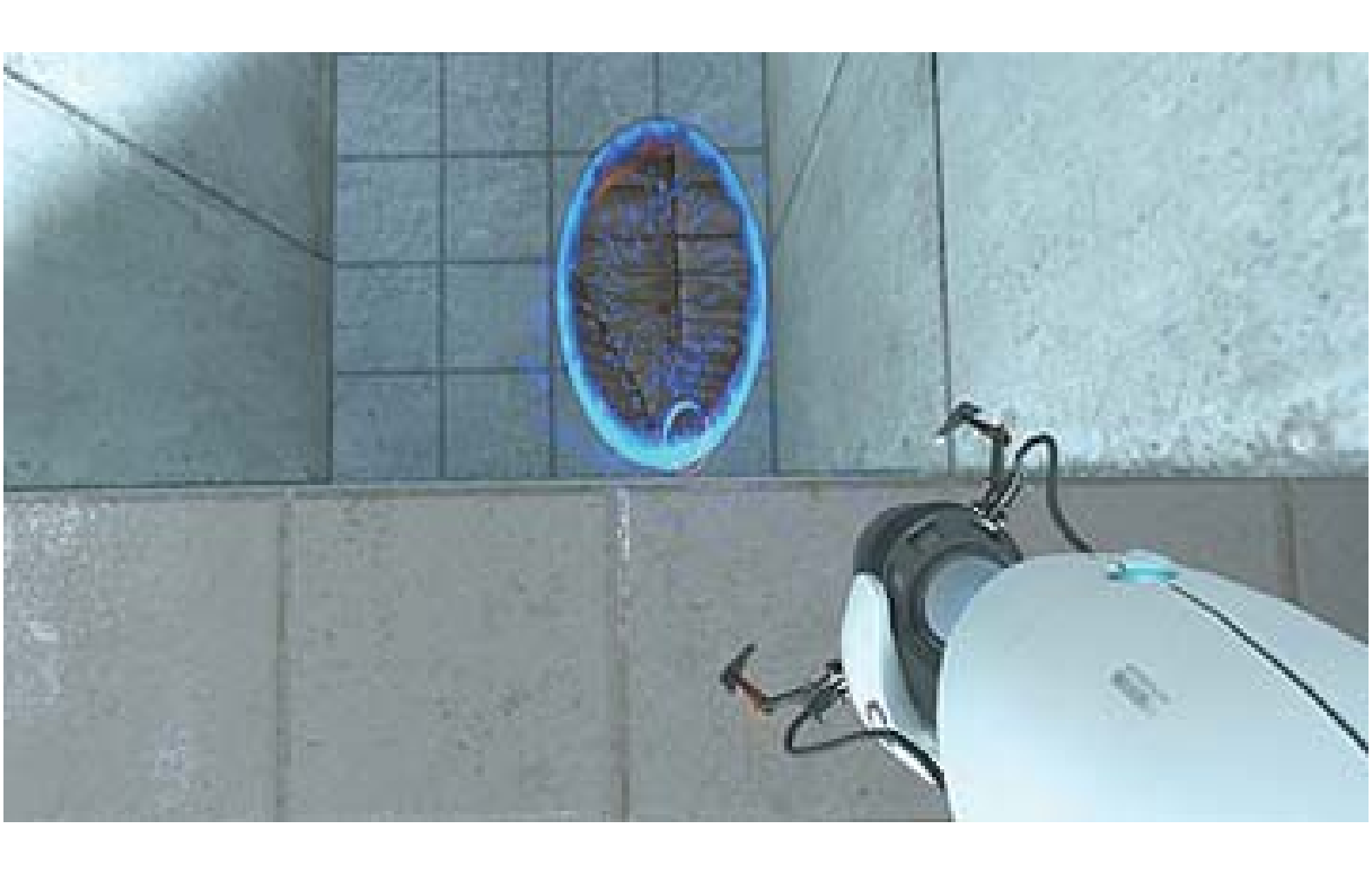


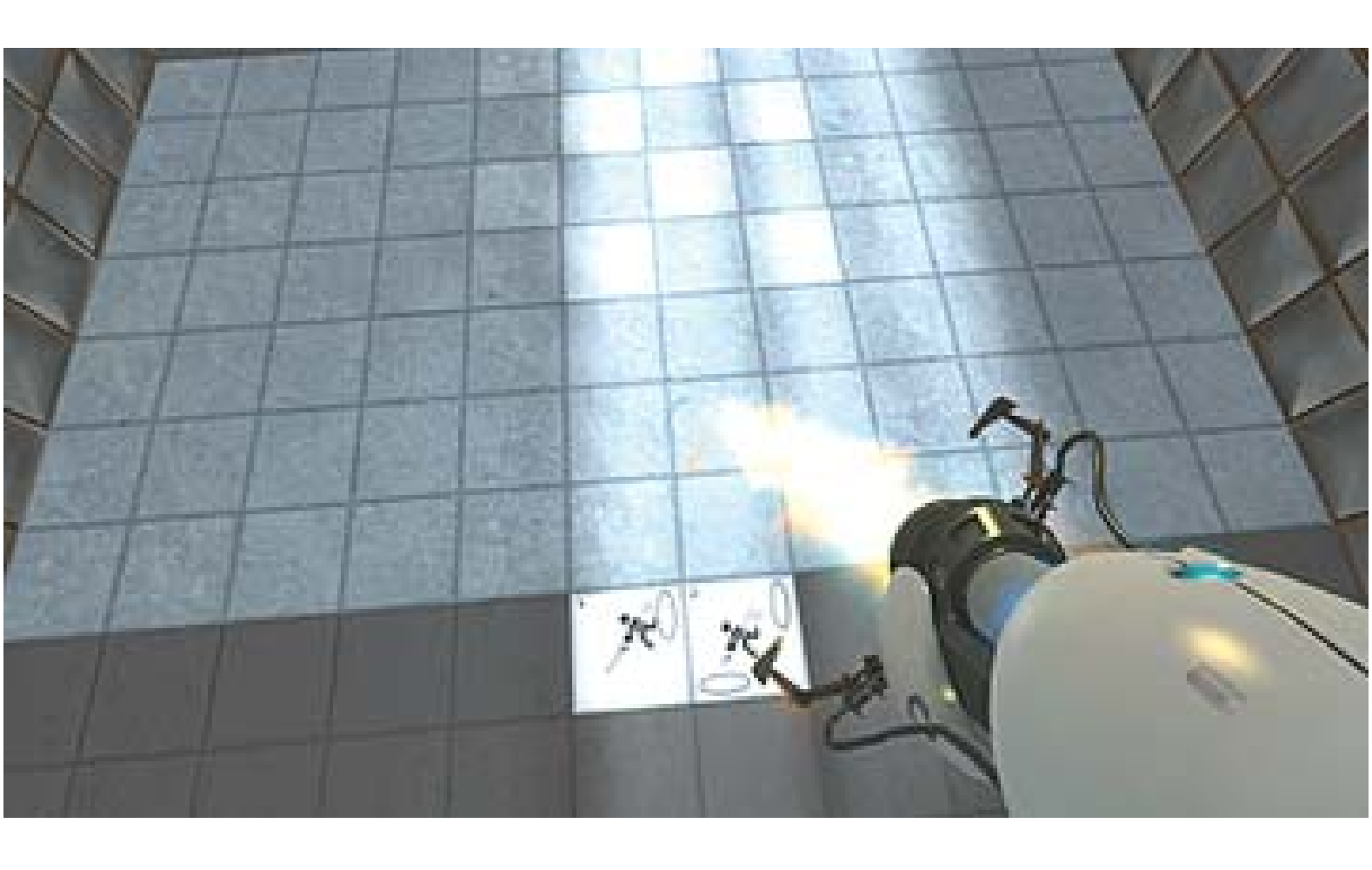
Once beyond the grid, fire your first portal on the far wall, and the second above the Catcher. This has just activated the lift. You are free to leave the room.



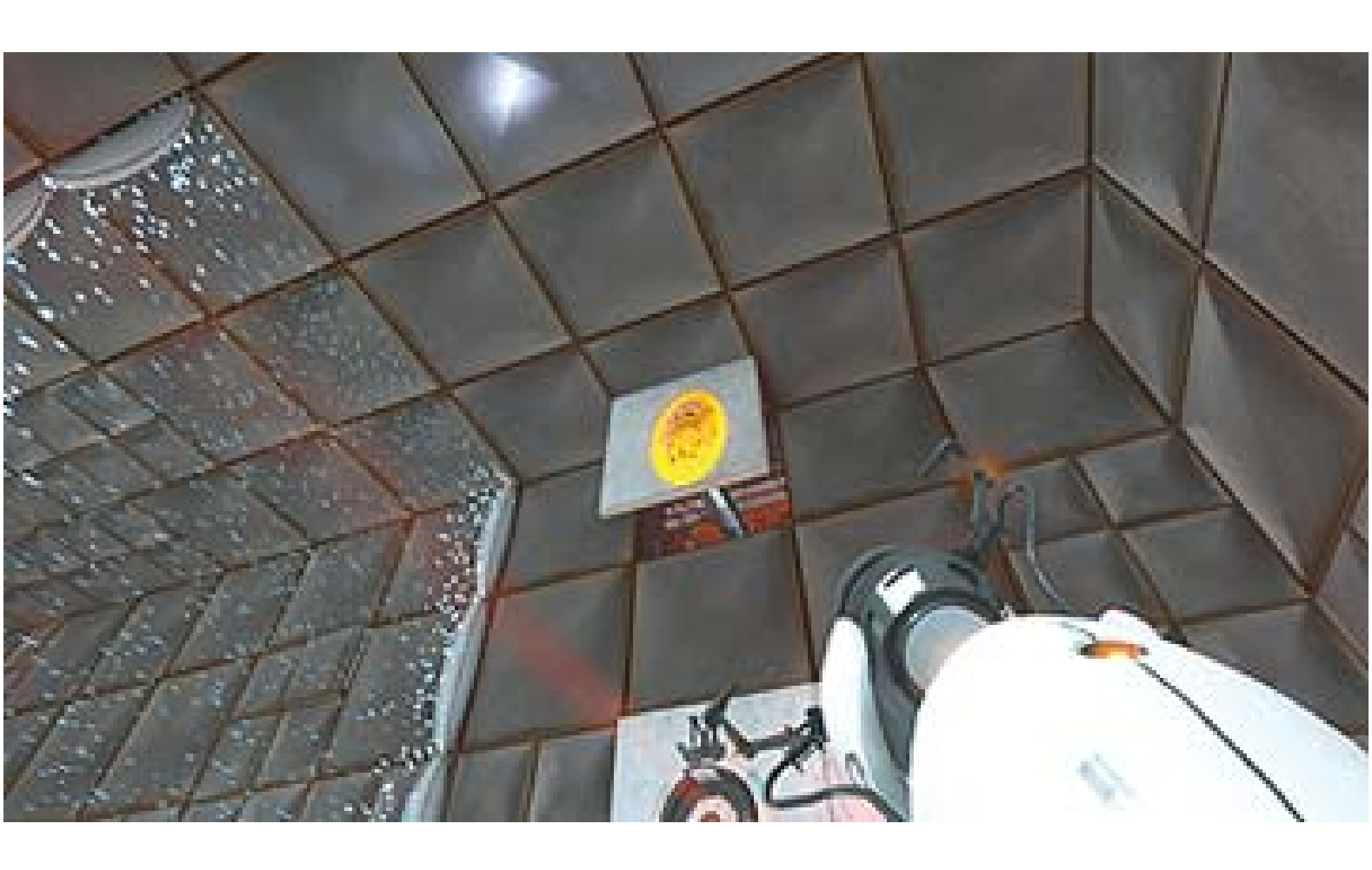


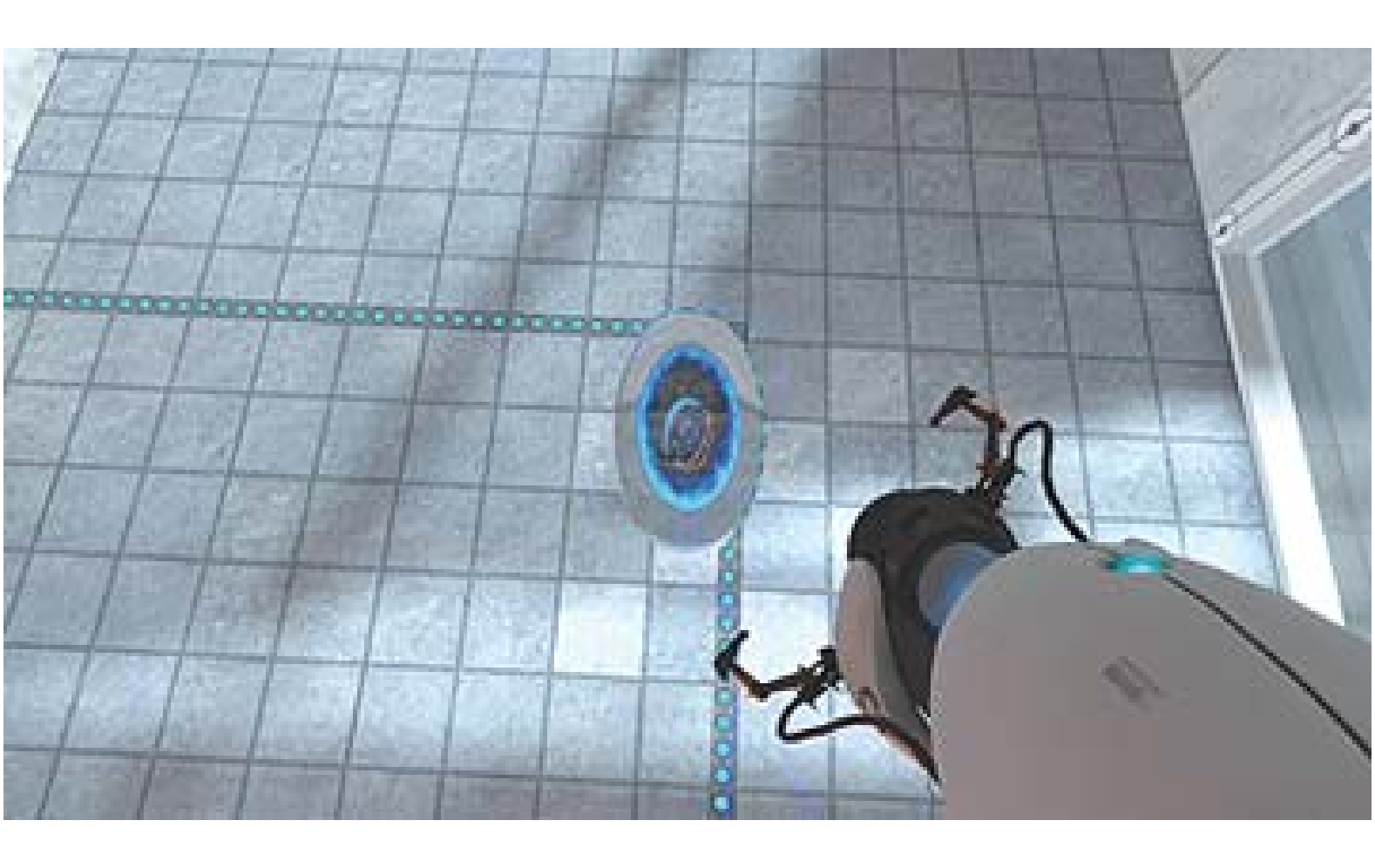
You are required to double-fling yet again in this next room. Place your first portal on the protruding panel directly above the entrance, then go into the room next to it and up the stairs. You have arrived before a small pit. Place your second portal here and jump through.

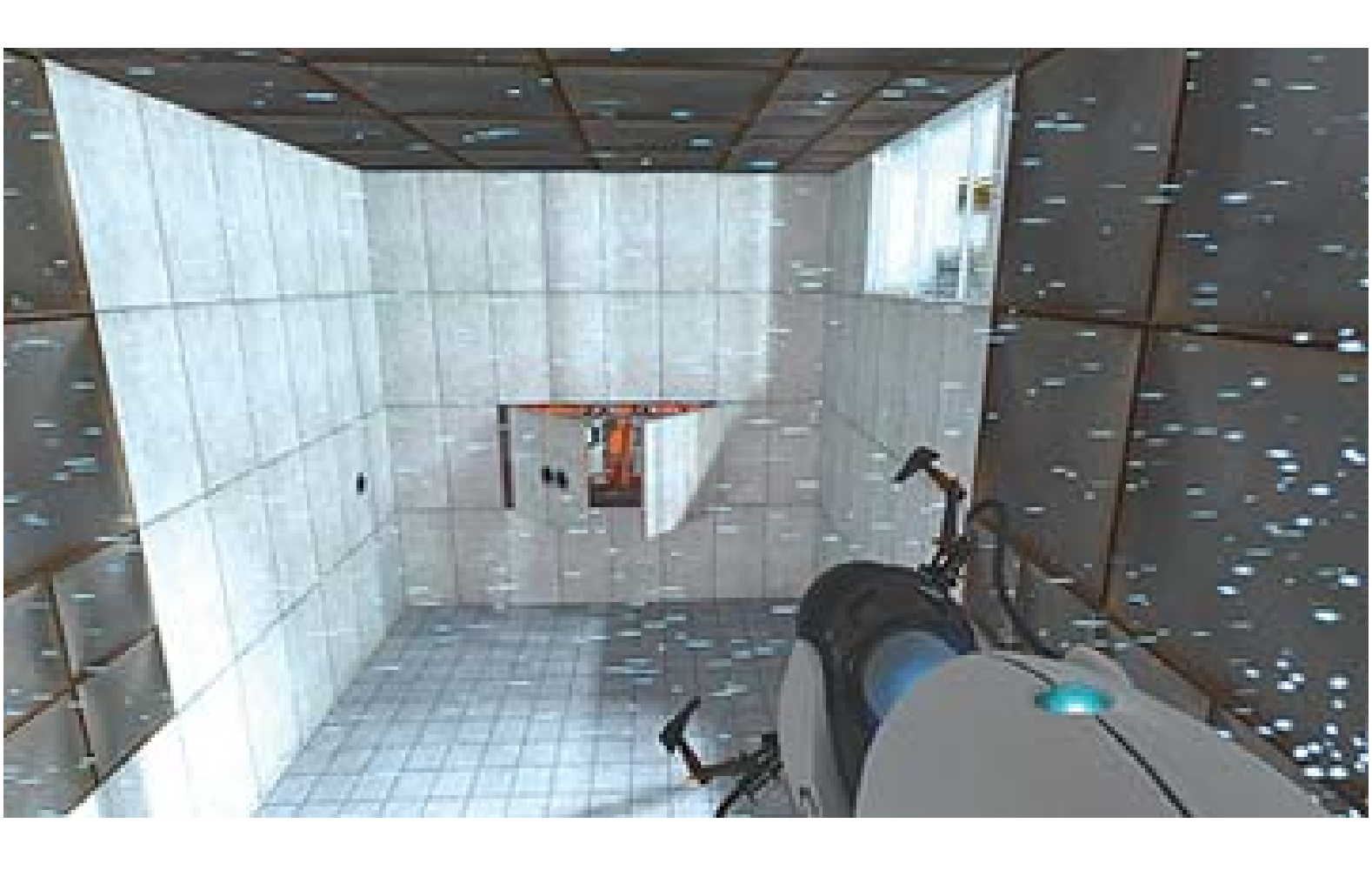




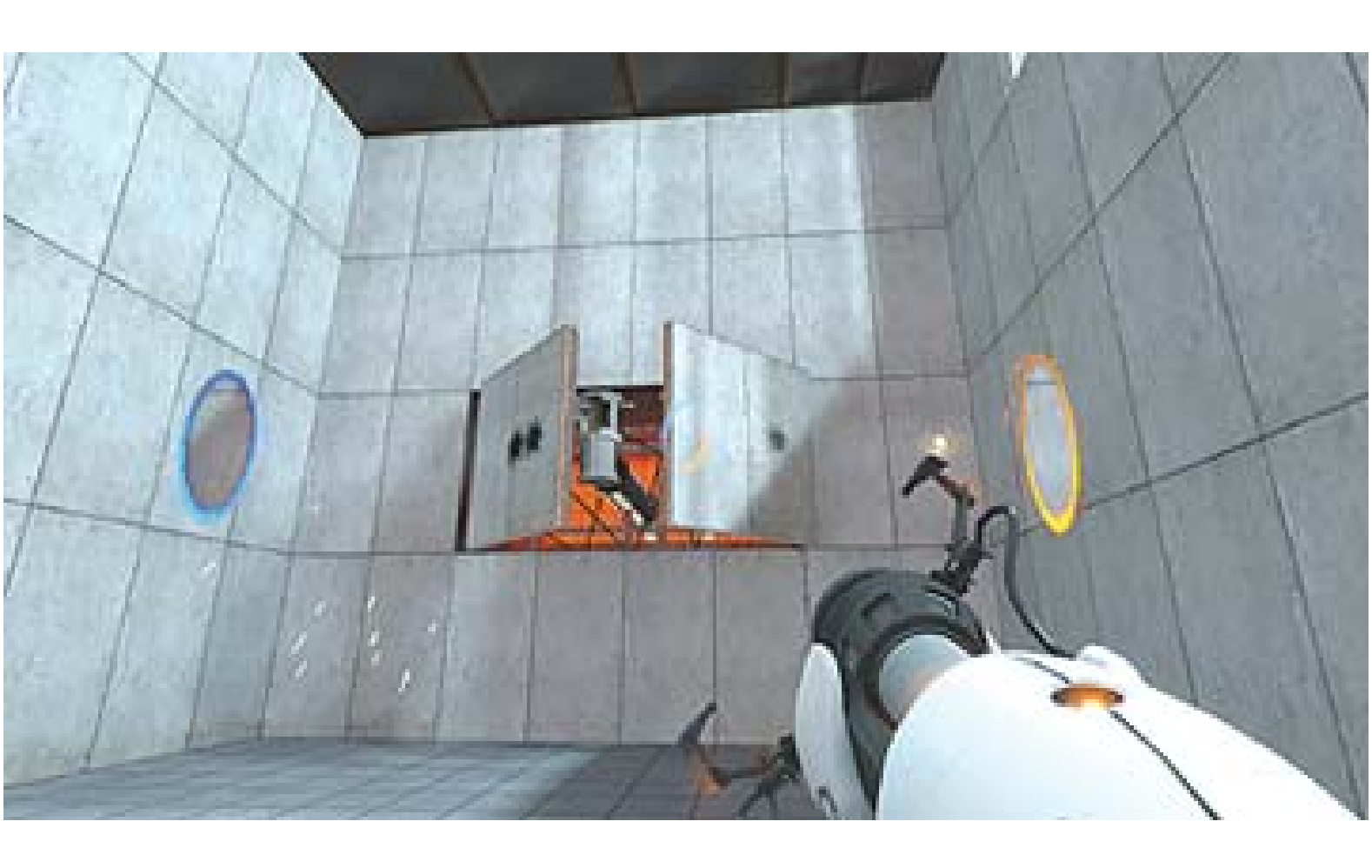
As you're falling through your first portal, replace your second portal where you're going to land. Your second trip through the first portal gives you enough momentum to clear the grid.

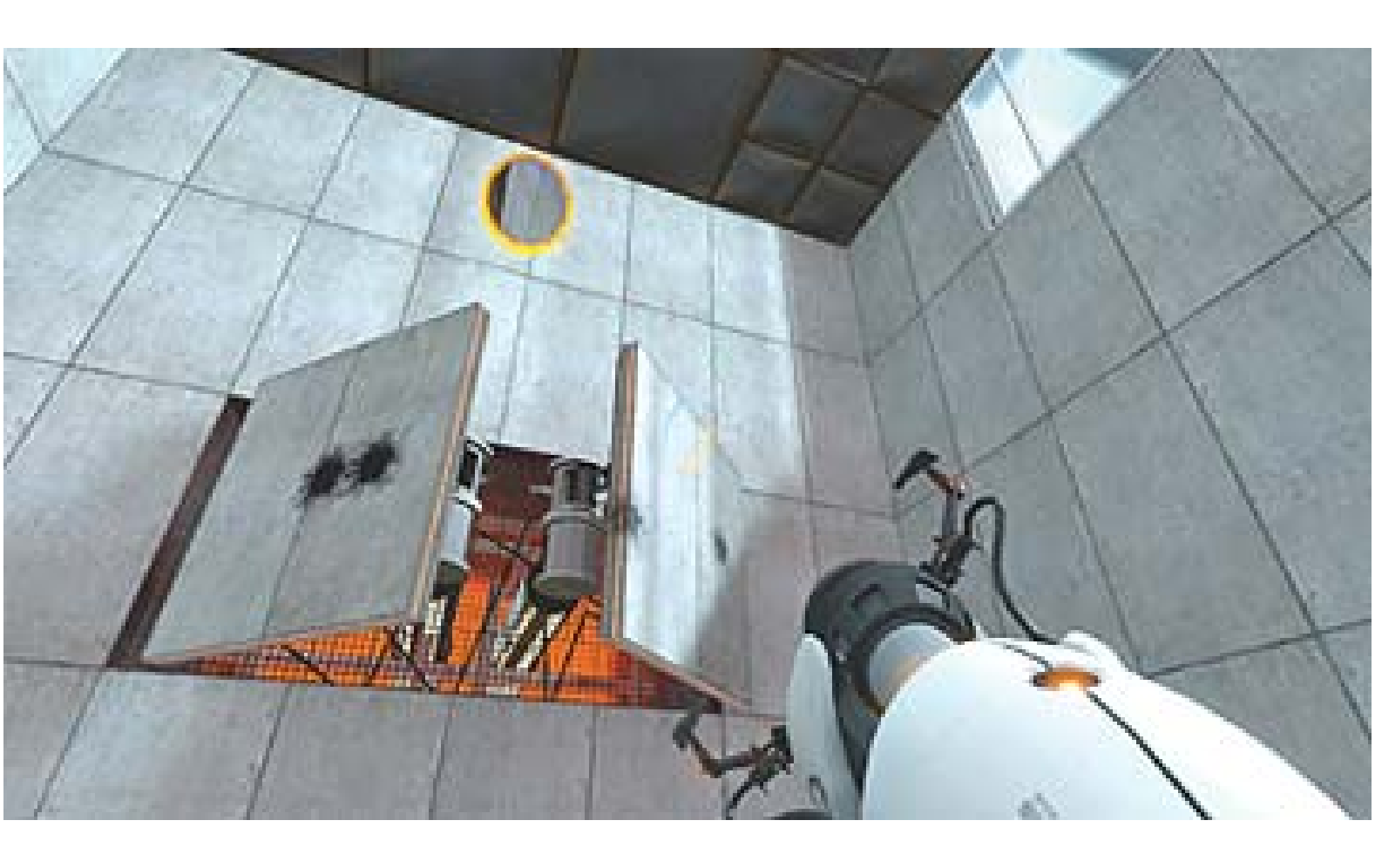


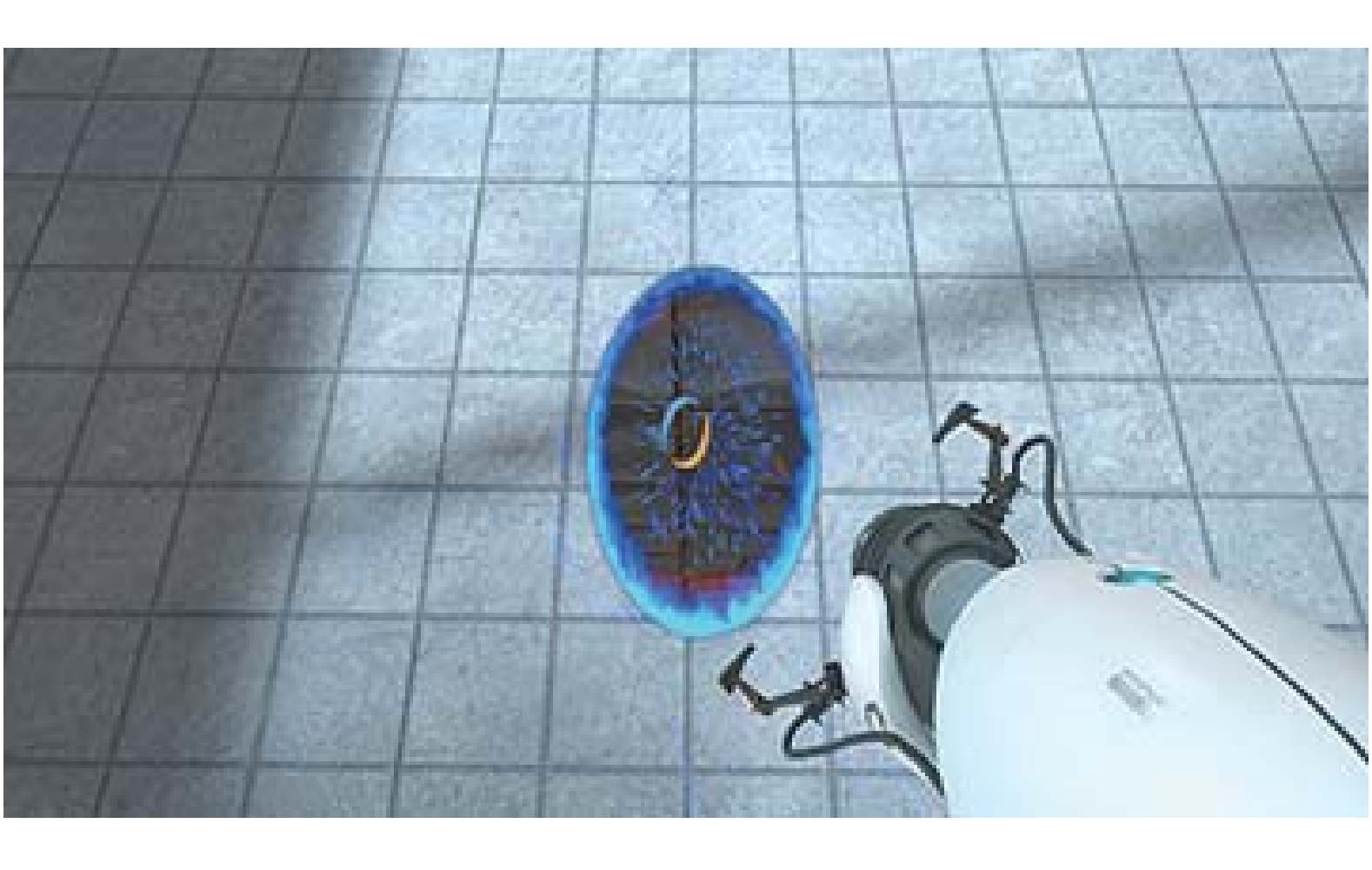




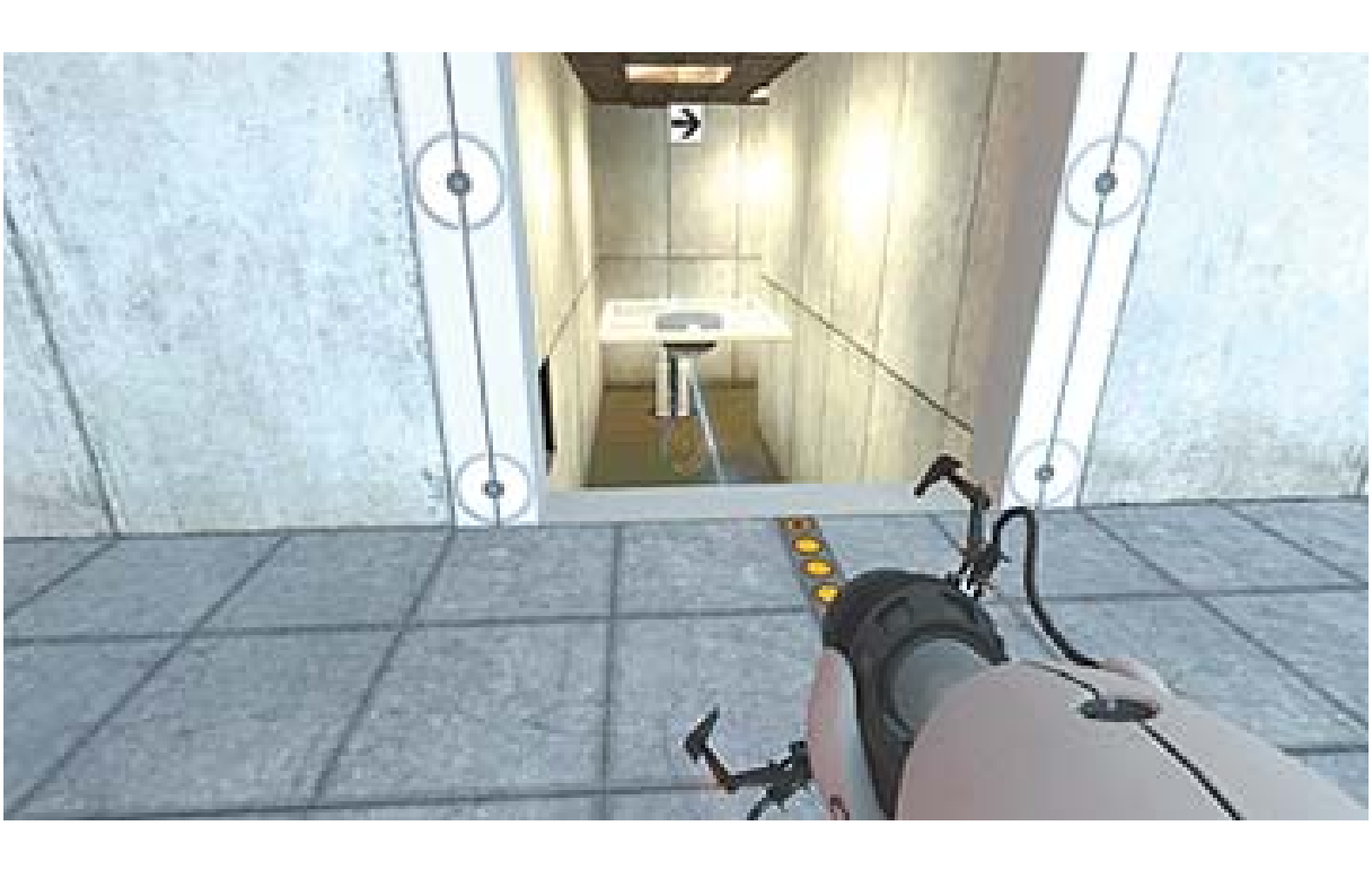
Repeat this process in the next room: Place your first portal on the protruding panel that's above the Ball Catcher, and place your second one nearby. As you fly out of that high panel, replace your second portal where you're going to land. Fly through the first and over the grid.

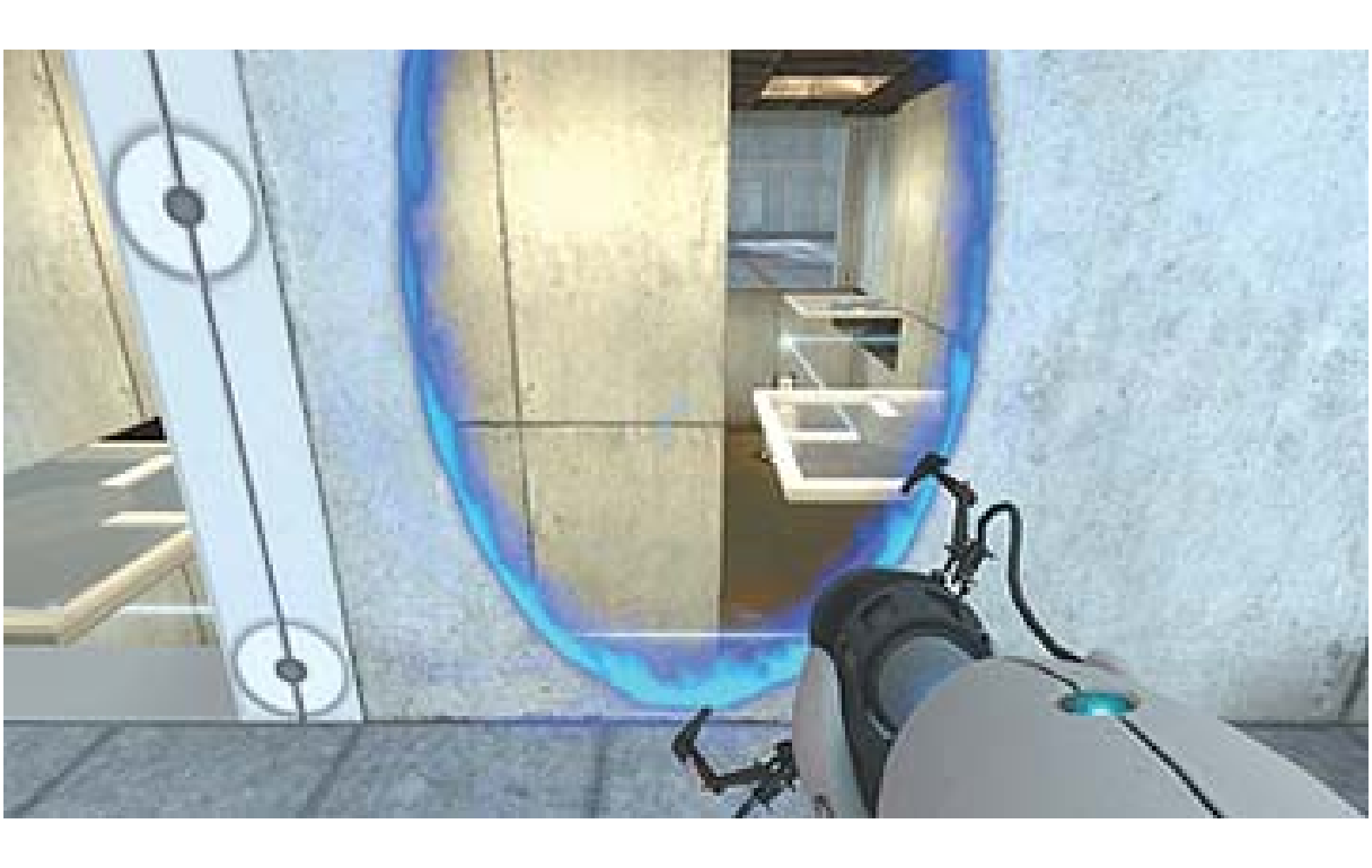


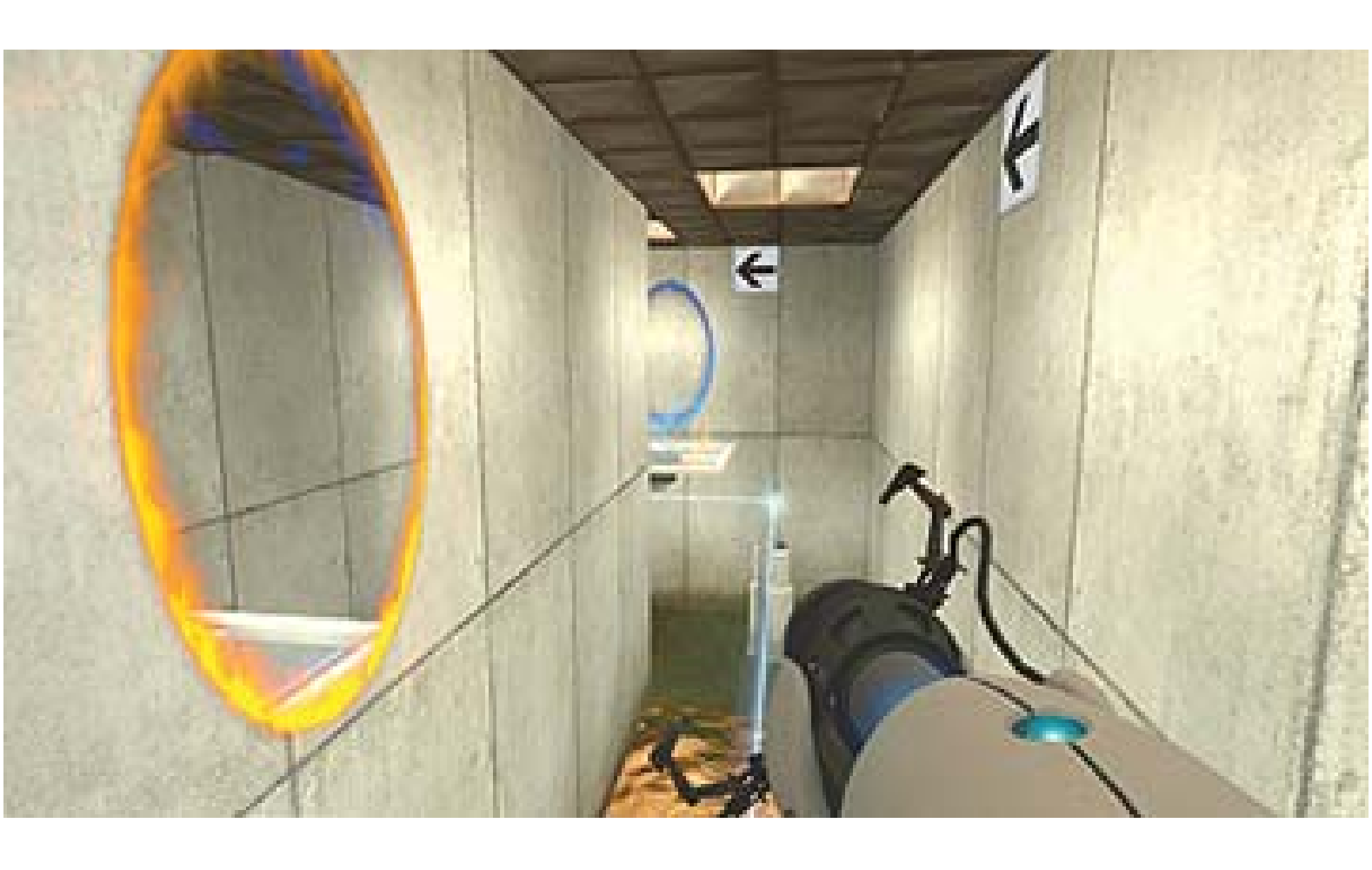




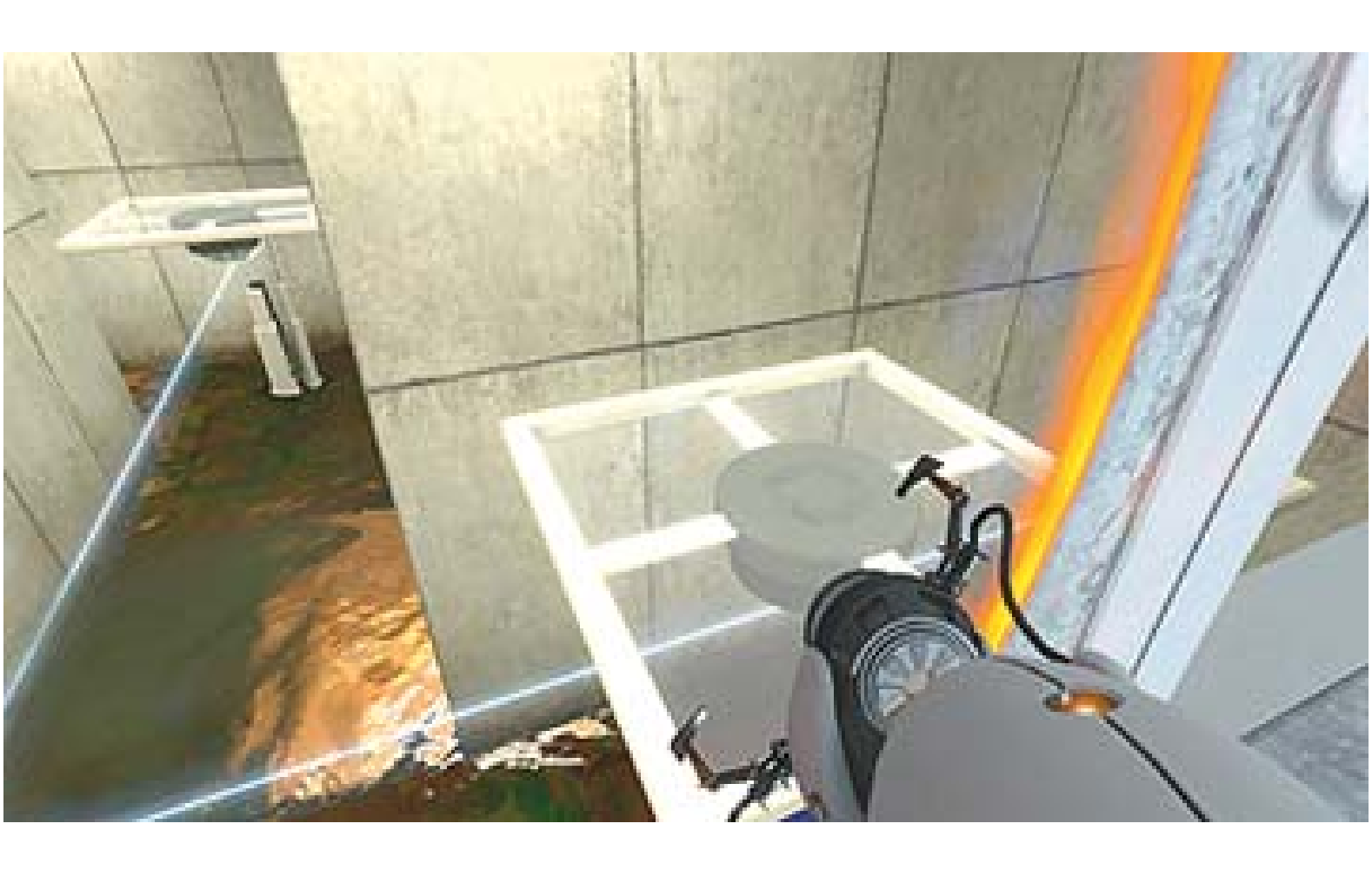
Dead center on the far wall of the next room are two protruding panels forming a sort of wedge. You want the energy ball that's coming from the previous room behind the grid to hit the panel on the right at just the correct angle to send it flying directly into the Ball Catcher. Here's how you do it: Place your first portal on the charred spot where the ball meets the wall, just opposite the left panel. Place your second portal on the exact same spot near the right panel. This will make it ricochet in the correct trajectory. To get out of this room you're going to have to double-fling again, so place your first portal at the highest point on the wall, right above the wedge panels. Place your second portal anywhere, jump through it, and replace it where you're going to land. You're now back in the previous room.

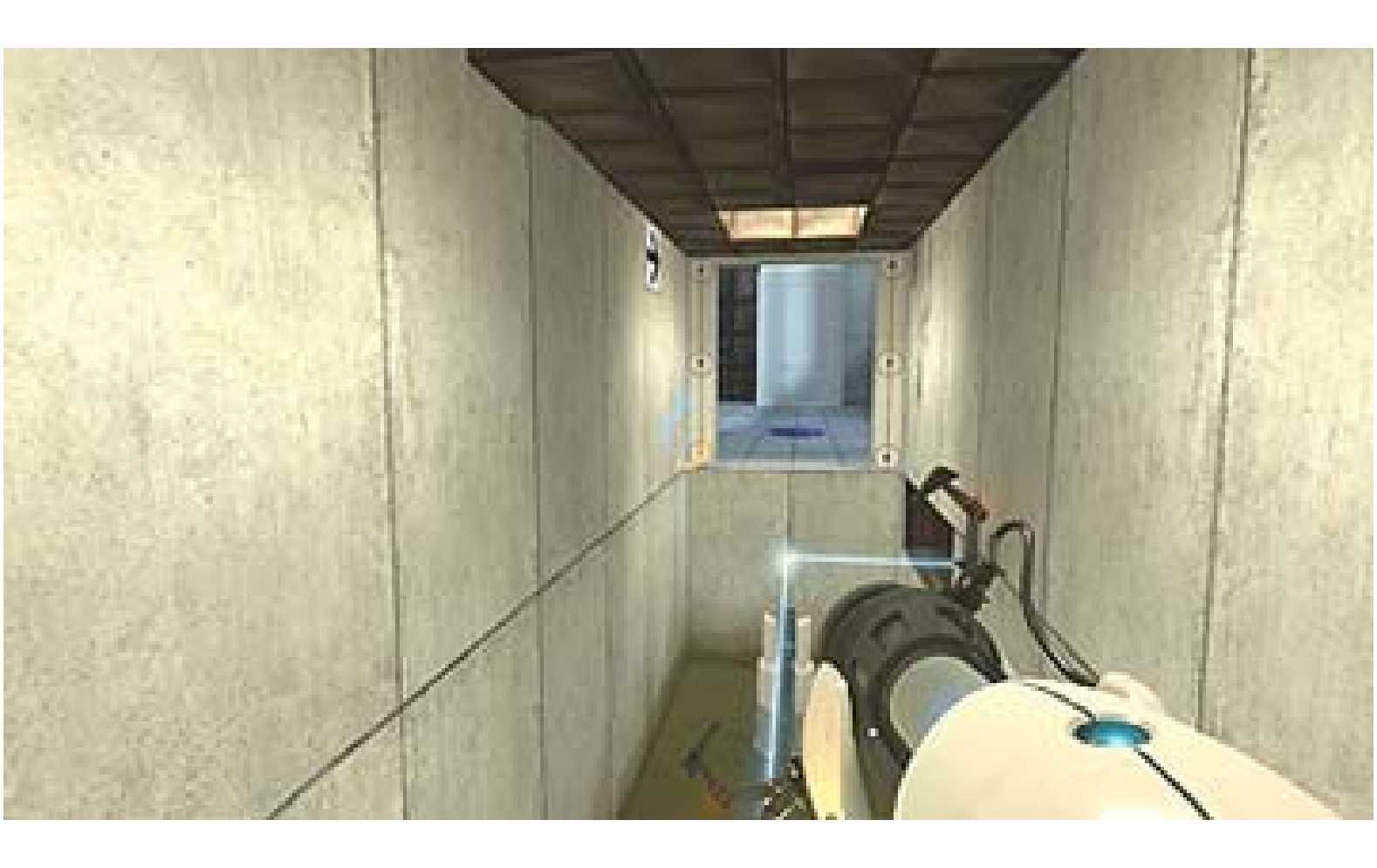


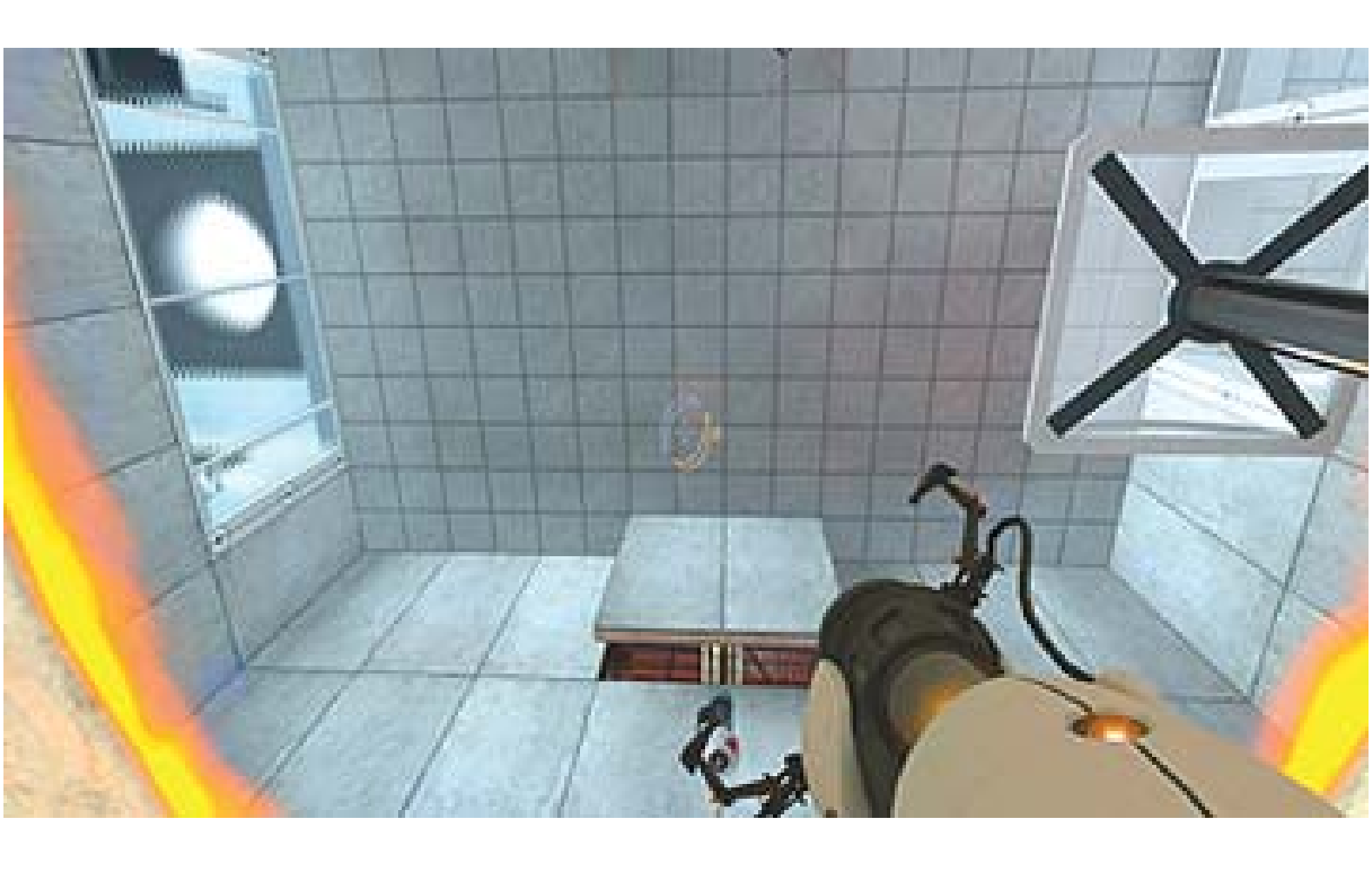




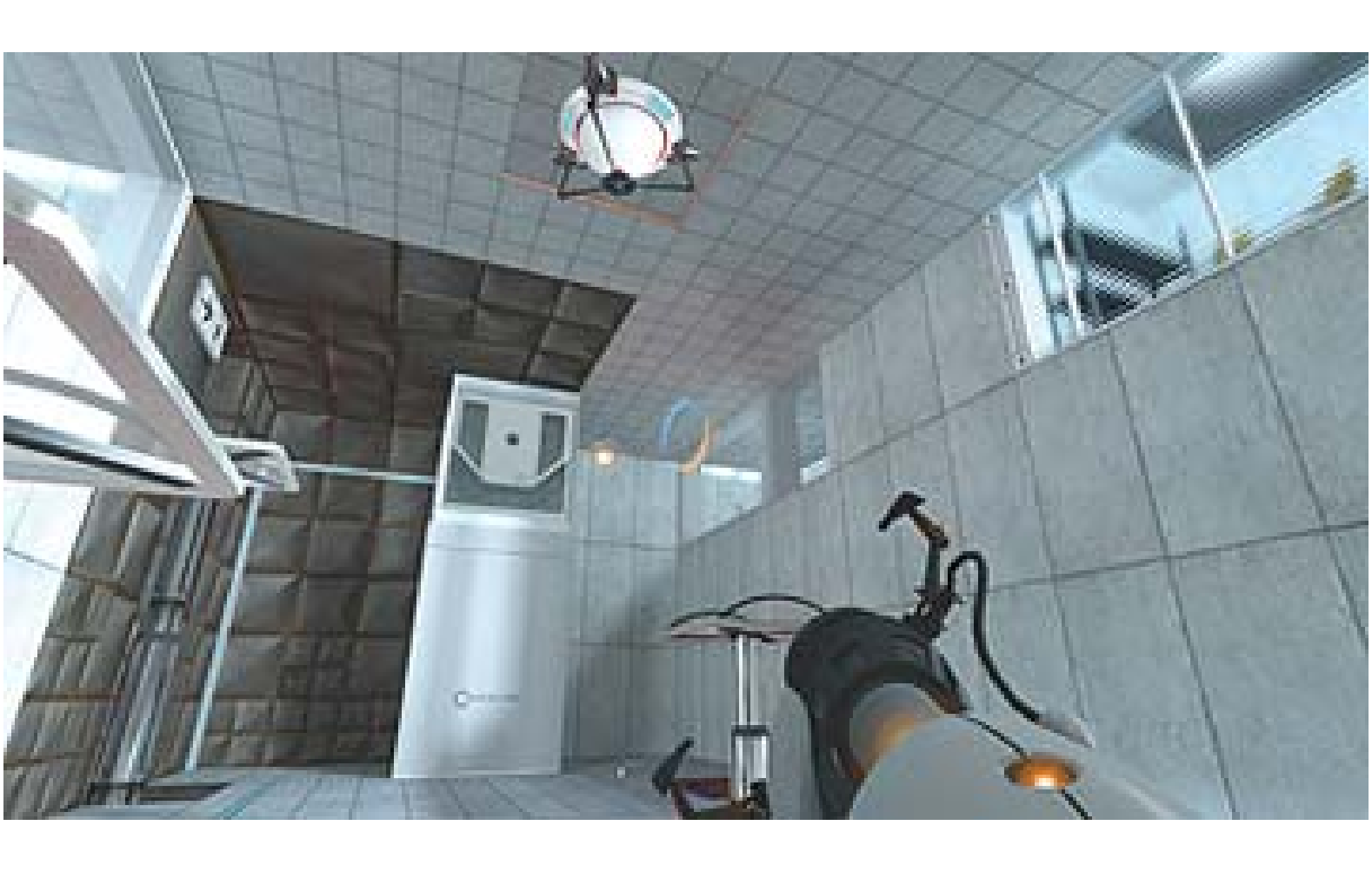
The Catcher activated the series of lifts that travel over the zigzagging goo-filled passage. To get to the other end, place your first portal on the first wall of the passage, as far as you can into the bend on the right. Place your second portal on the wall next to the entrance to the tunnel.



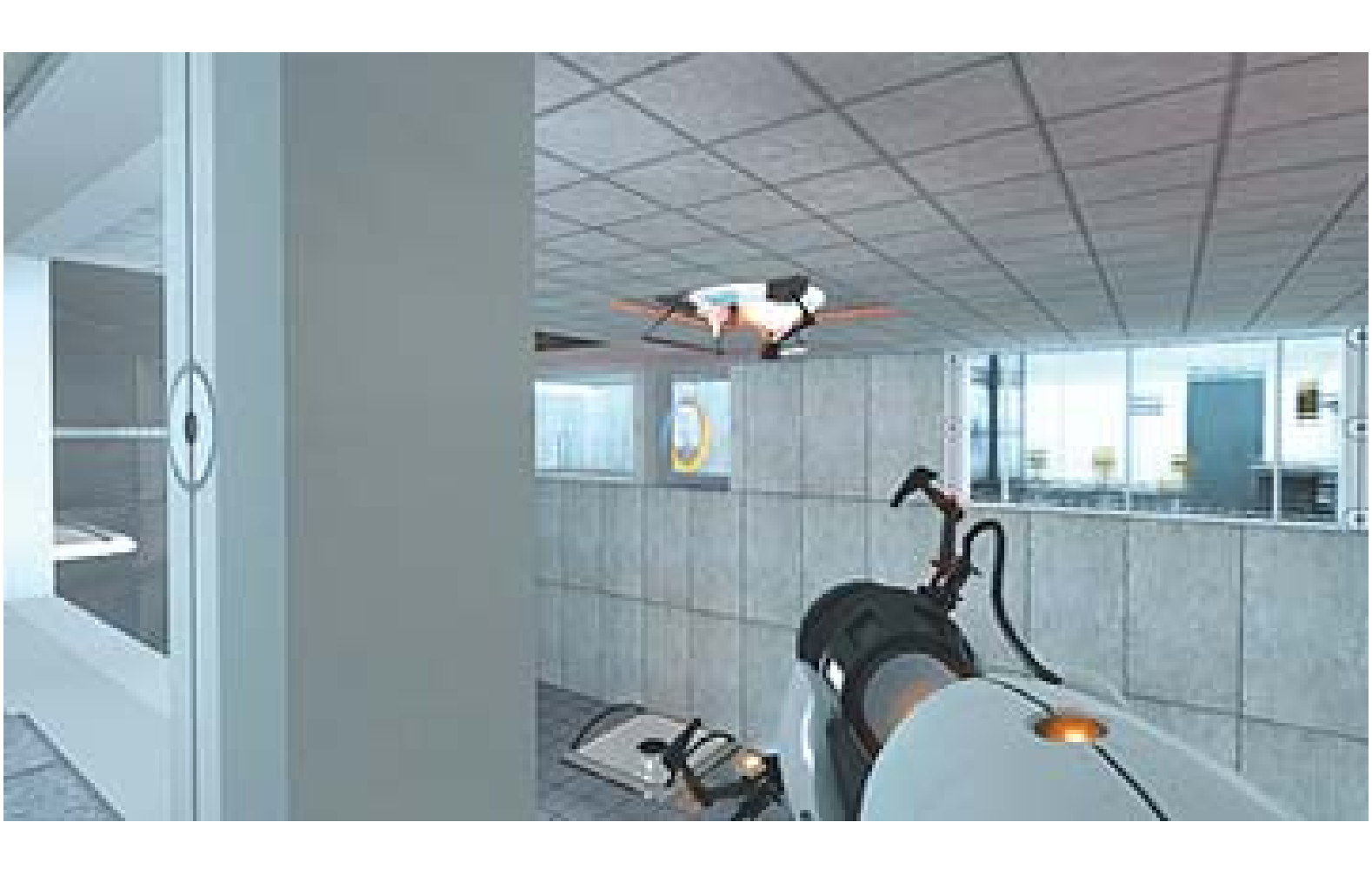


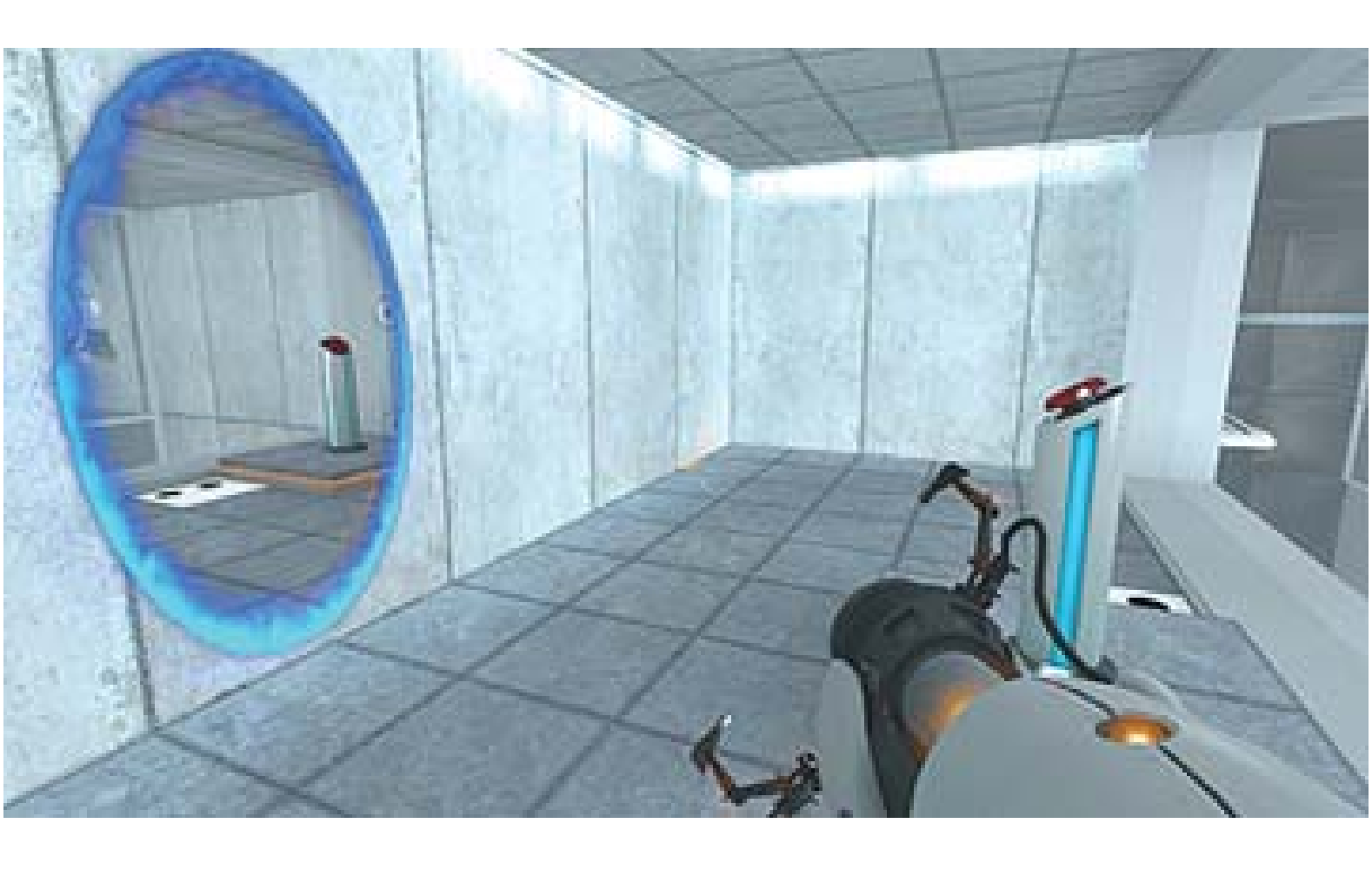


When you can see the lift through your second portal, hop on and replace your second portal farther down the passage way. When the lift carries you back to the passage entrance, repeat the process, placing portals farther down the passage until you can aim at the ground of the room at the other end. Once it's visible, fire a portal there and jump through when it's safe—remember, the goo is highly toxic.

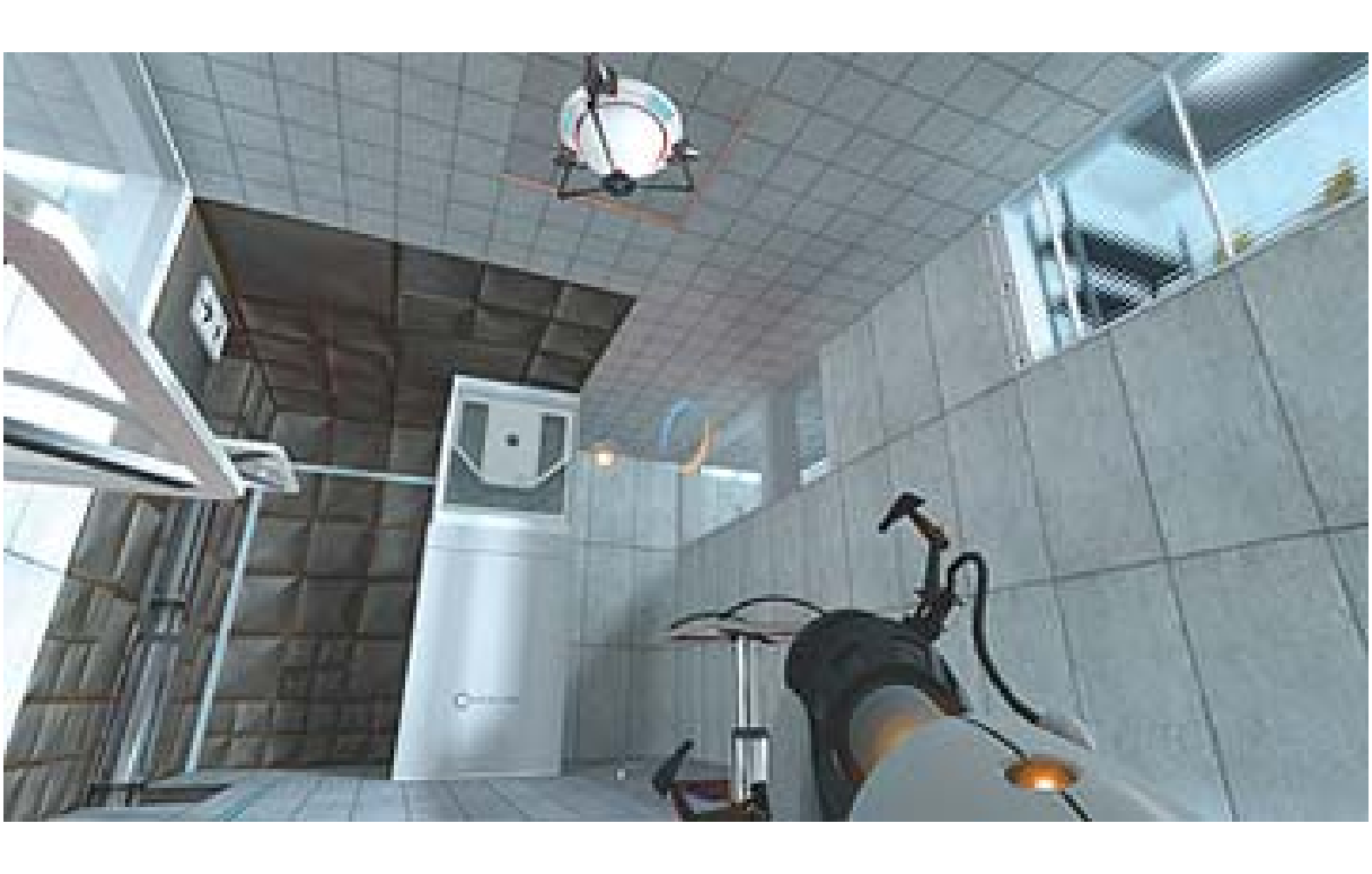


You are now in the last room of the chamber. Activating the lift that leads to the exit will require some split-second timing, so it may take a few tries before you get it right. Basically, you need to hit both of the switches in the elevated rooms to open the panel that's blocking the Ball Catcher. After it's open, you have to employ some portal tricks to get the energy ball into it.





Your first order of business is to hop on one of the lifts that lead to either of the switch rooms. You're going to have to activate both of them to open the panel that's blocking the Catcher. Once you're up, place your first portal in the other room, and your second portal opposite the switch in the room you're currently in. You should be able to see both switches from where you're standing. To buy yourself as much time as possible, wait until the energy ball dissipates before initiating the next step.

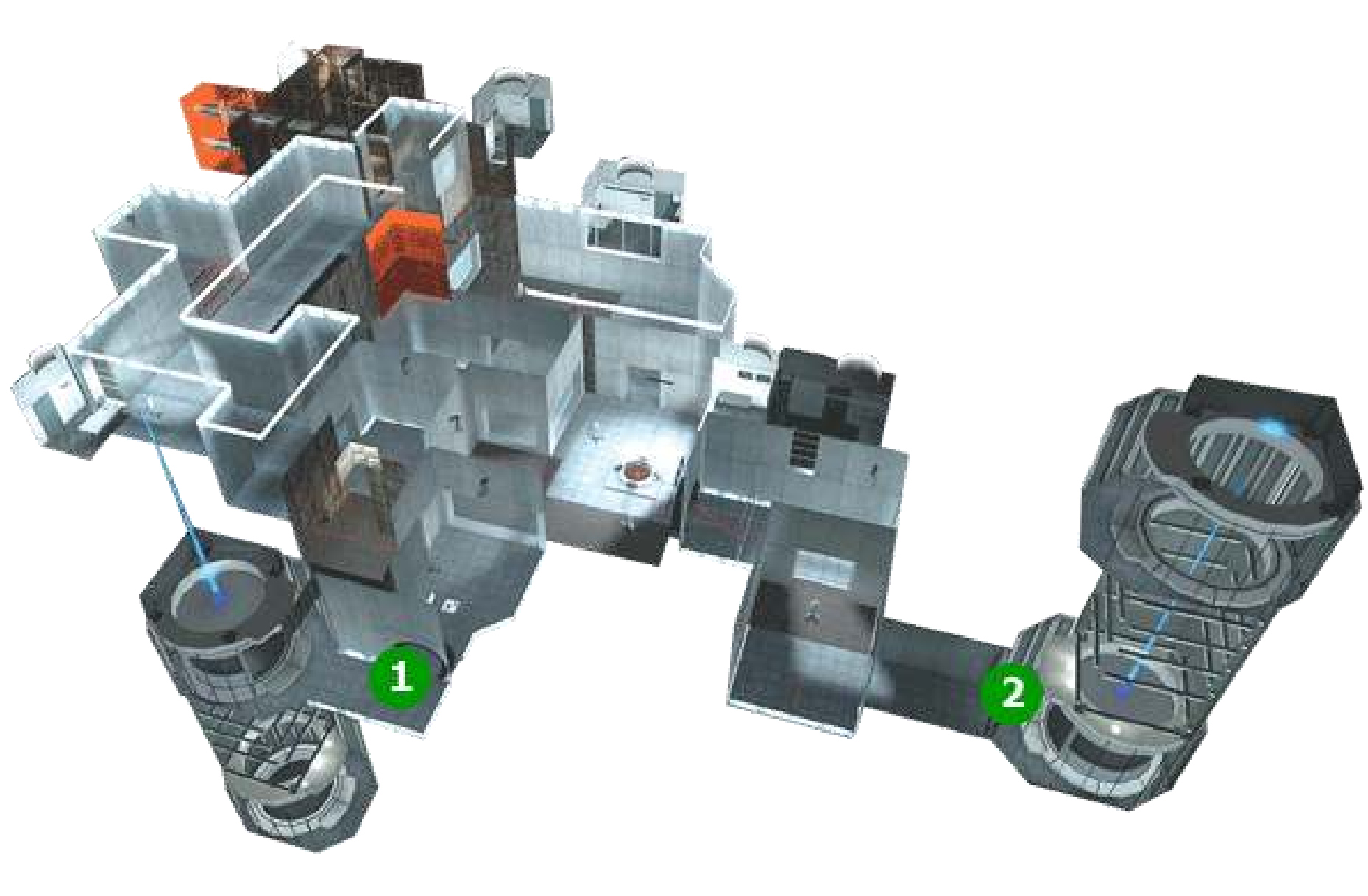


When you have a fresh ball, quickly hit both switches, and fire your first portal onto the protruding panel opposite the exposed Catcher. Aim your second at the charred spot where the energy ball touches ground. If your timing is right, the ball meets the Catcher before the Catcher snaps shut. The lift now descends and takes you to the next chamber.

Remember to play through our Advanced and portal challenge sections for this Chamber

Test Chambers

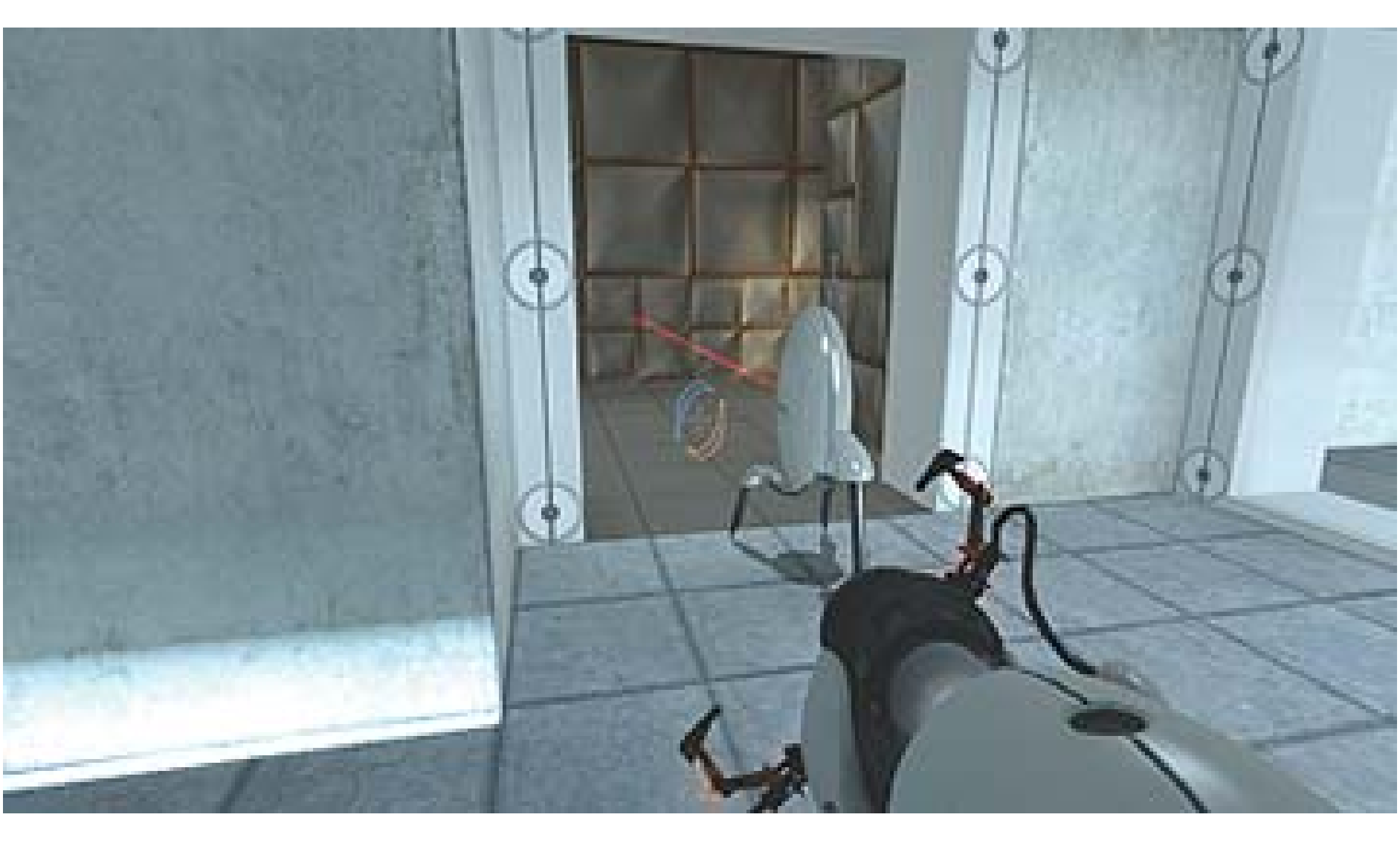
Chamber 16



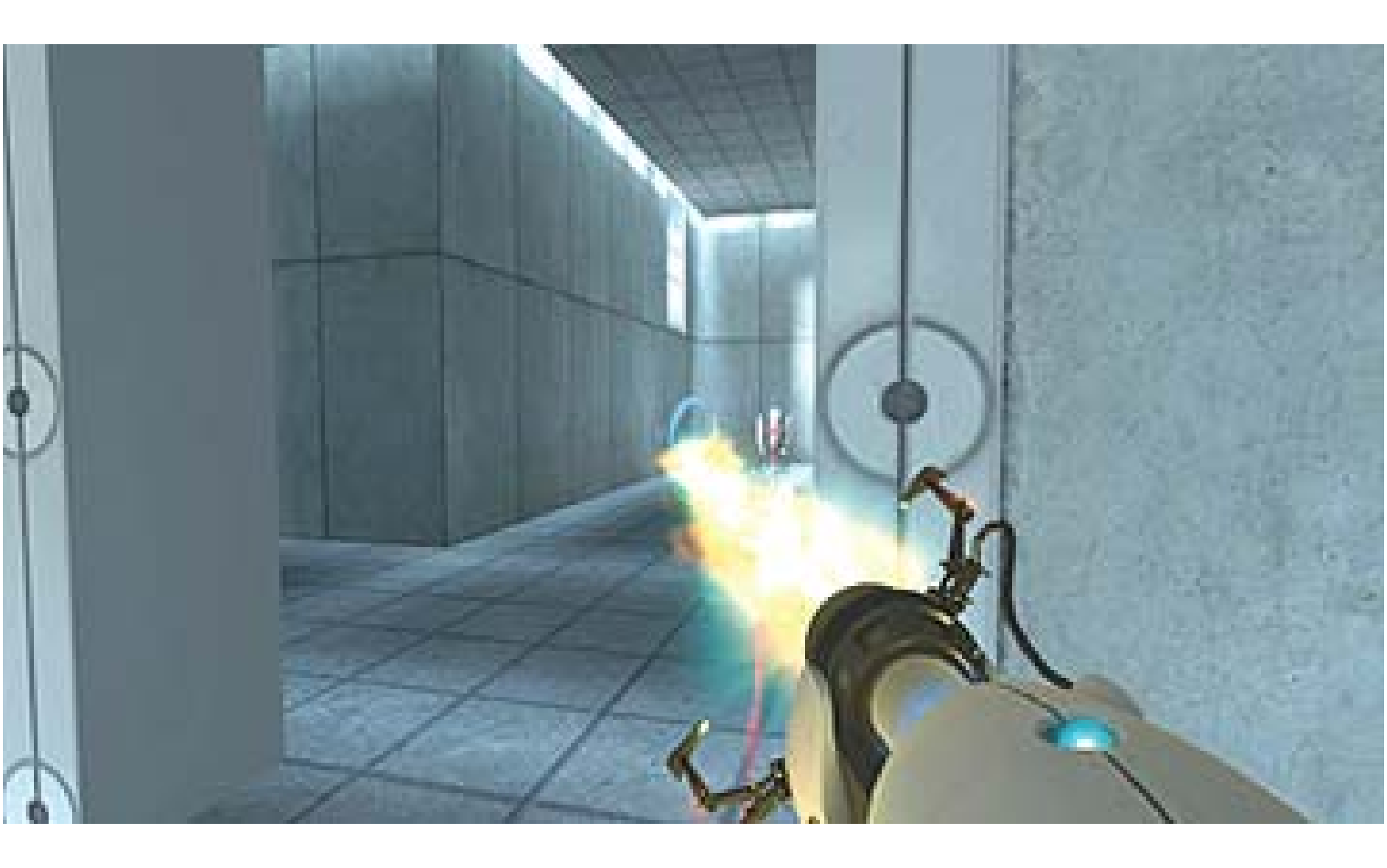
Map Legend
1.Test Chamber 16 Start Point
2.Test Chamber 16

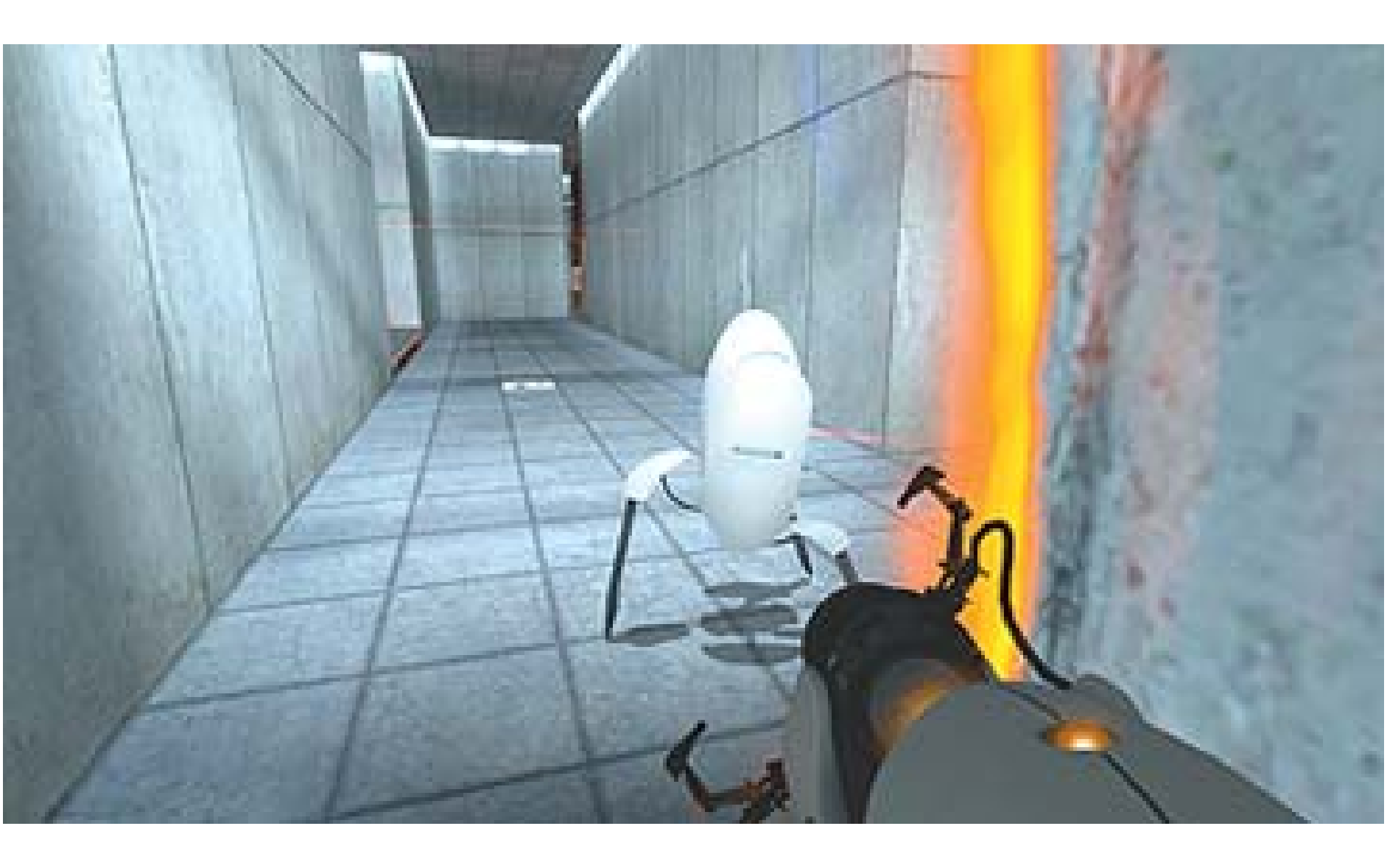
Caution

Although they may talk sweetly, the stationary turrets you encounter in Test Chamber 16 mean serious business indeed! When they get you in their laser sights, it's curtains for you in just a few seconds. Luckily, there are a few ways to foil them. For one, their equilibrium leaves a lot to be desired, so you can simply walk into them and tip them over. They're also very susceptible to being knocked over by Weighted Storage Cubes. You can also pick a turret up if you manage to get behind one, so feel free to smash turrets into each other. If you simply can't avoid them, remember that Cubes block their fire.

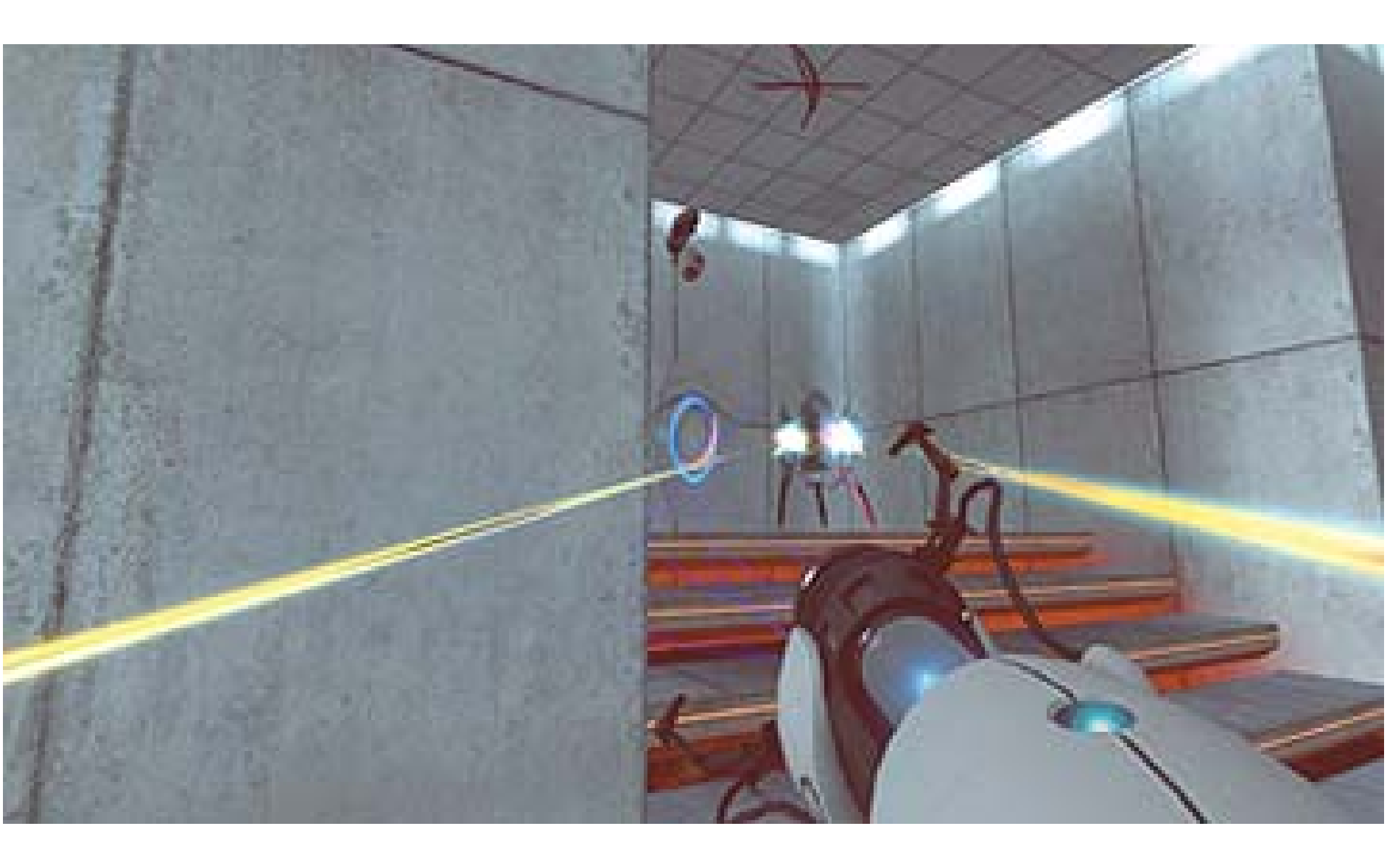


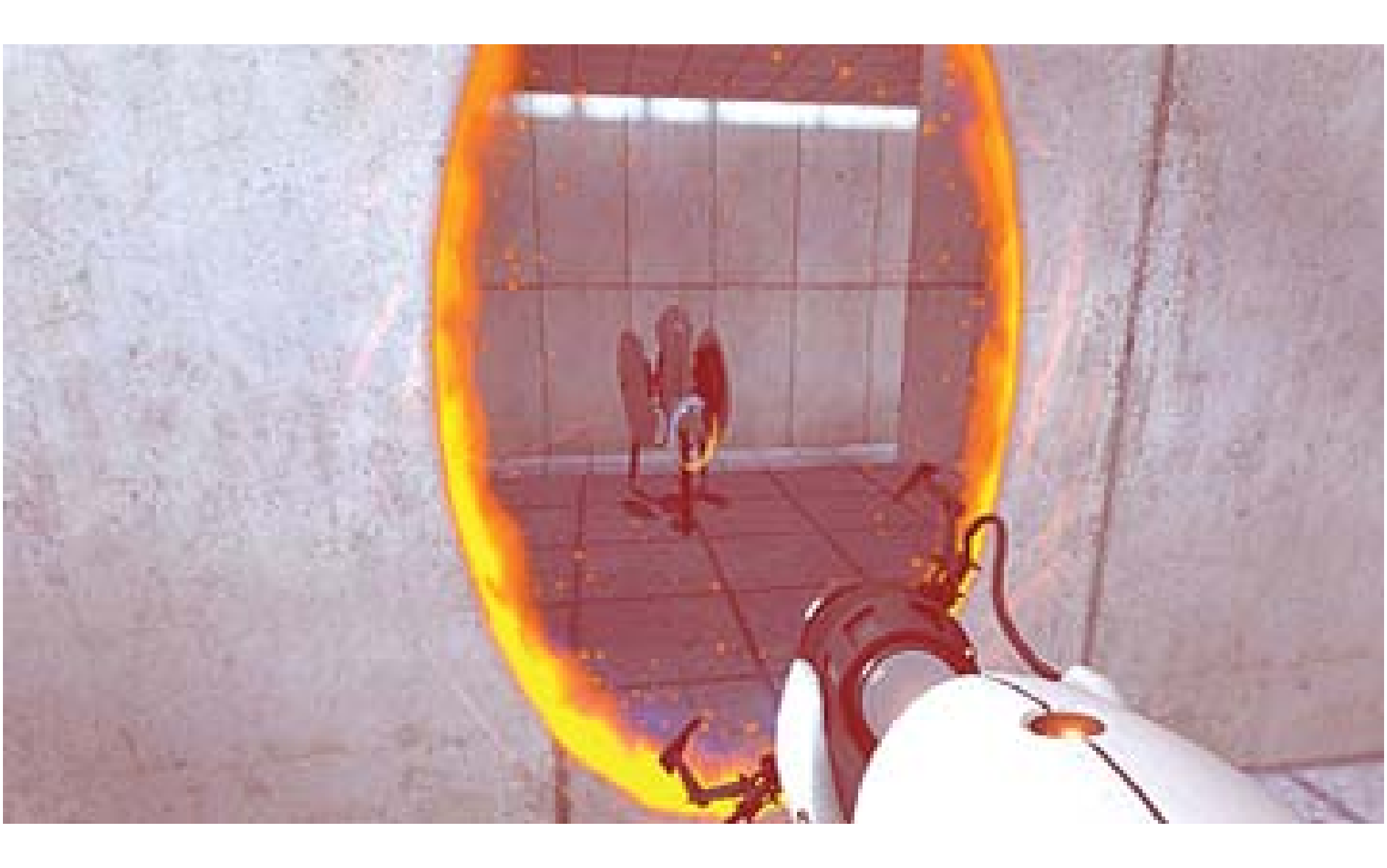
When GLaDOS is done pontificating, the blast doors leading you into Test Chamber 16 open up. The first thing you see is a stationary turret facing away from you. Don't worry—they're only deadly if their laser sights are pointing at you. Just walk into it to tip it over.



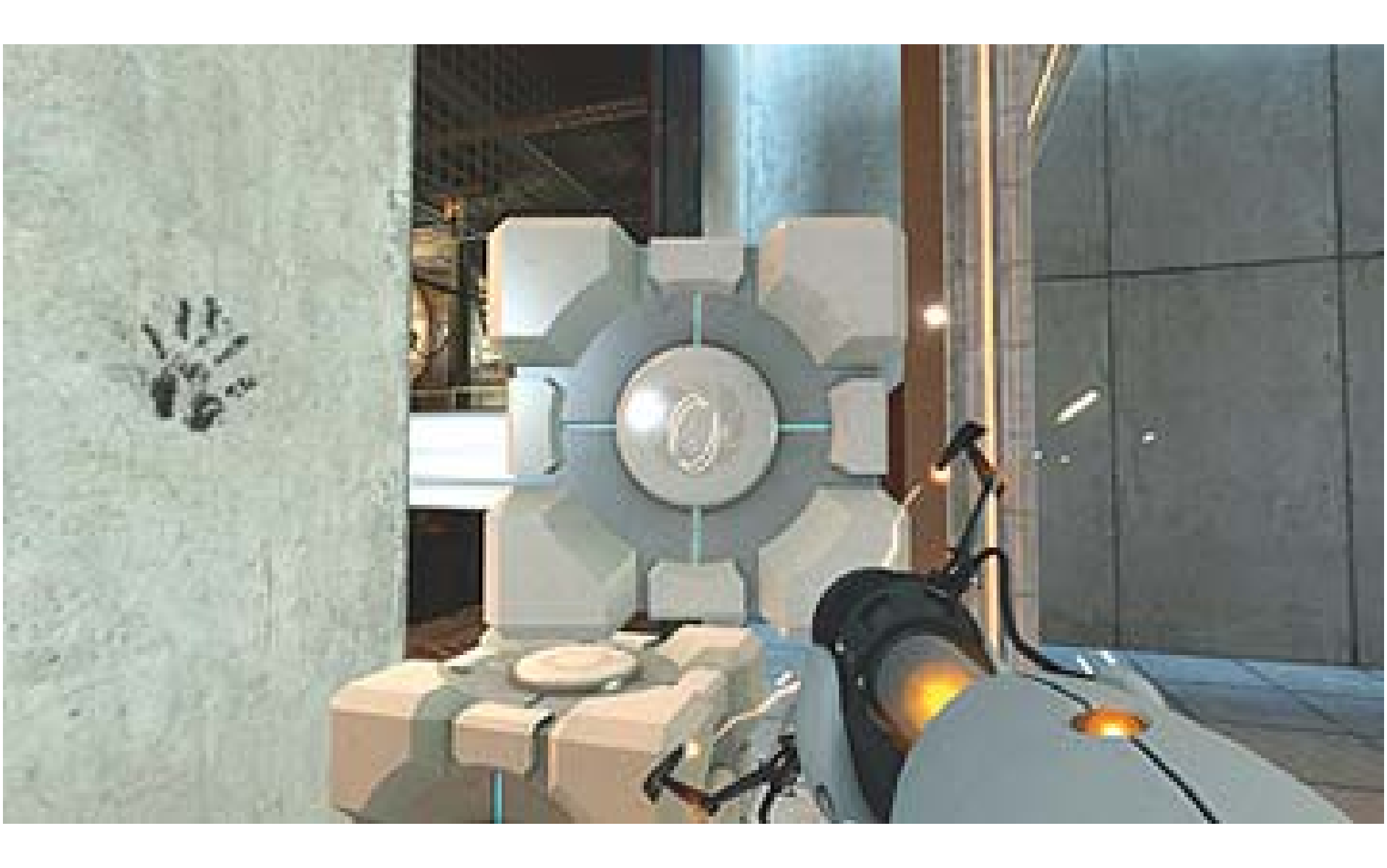


As you walk down the hall, you're greeted with a laser sight aiming straight in your path. Cross the threshold quickly, aim your first portal right next to the turret, and take cover on the other side of the threshold. Place your second portal on the wall here, walk through, and tip over the turret.

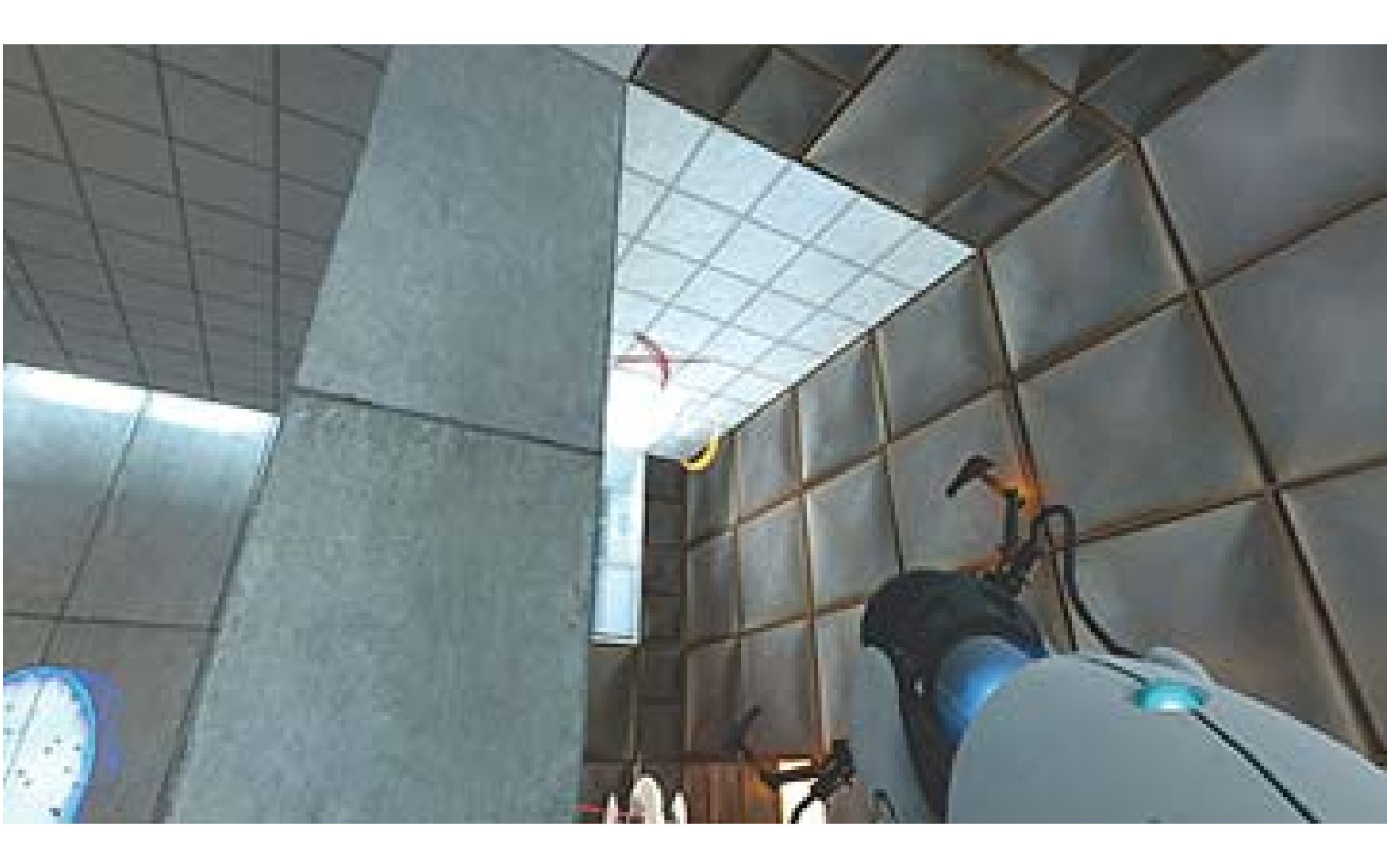


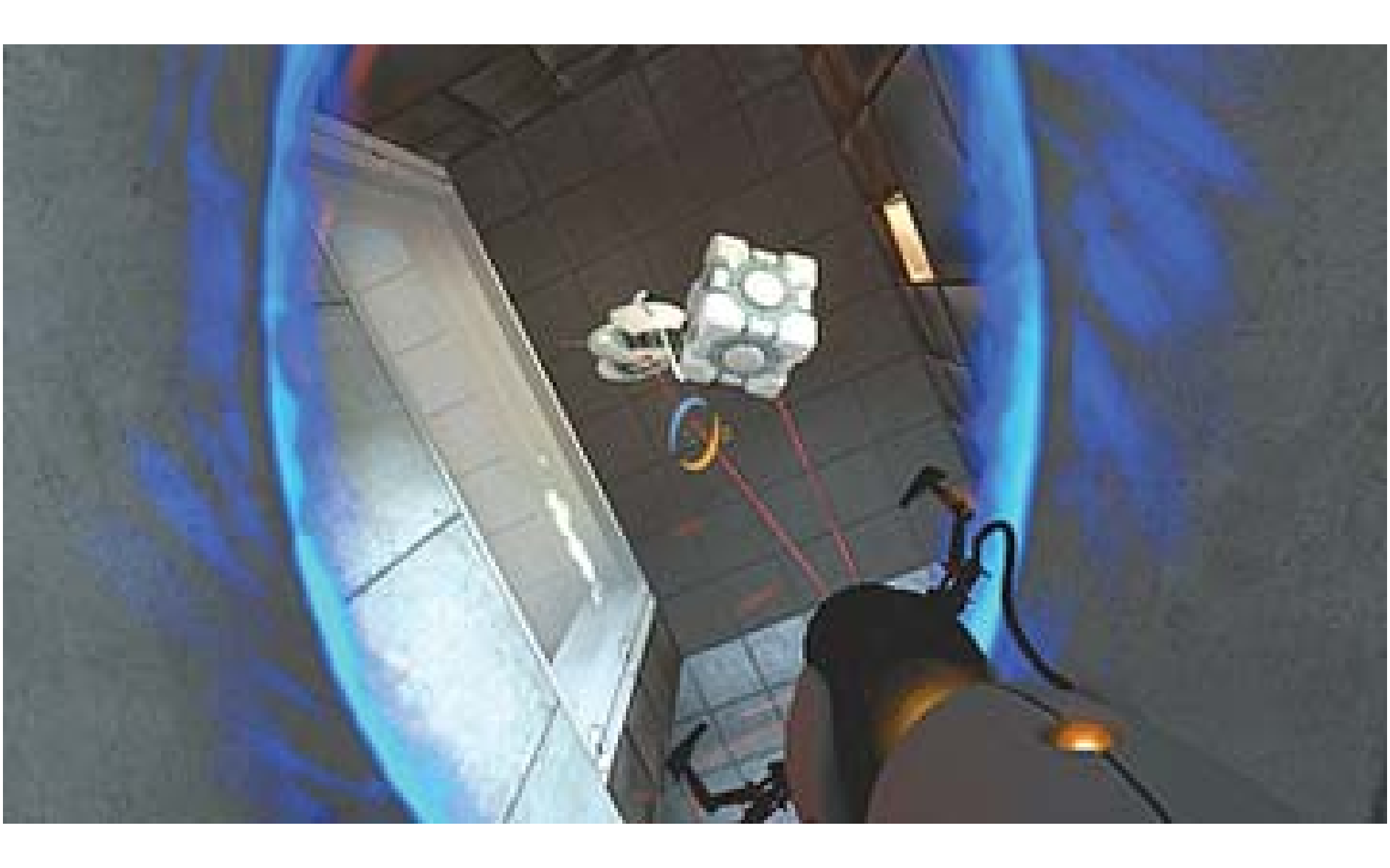


The next turret is down the hall, sitting atop some steps. Place your first portal behind it, and your second after you're back behind cover. Walk through and neutralize the turret.

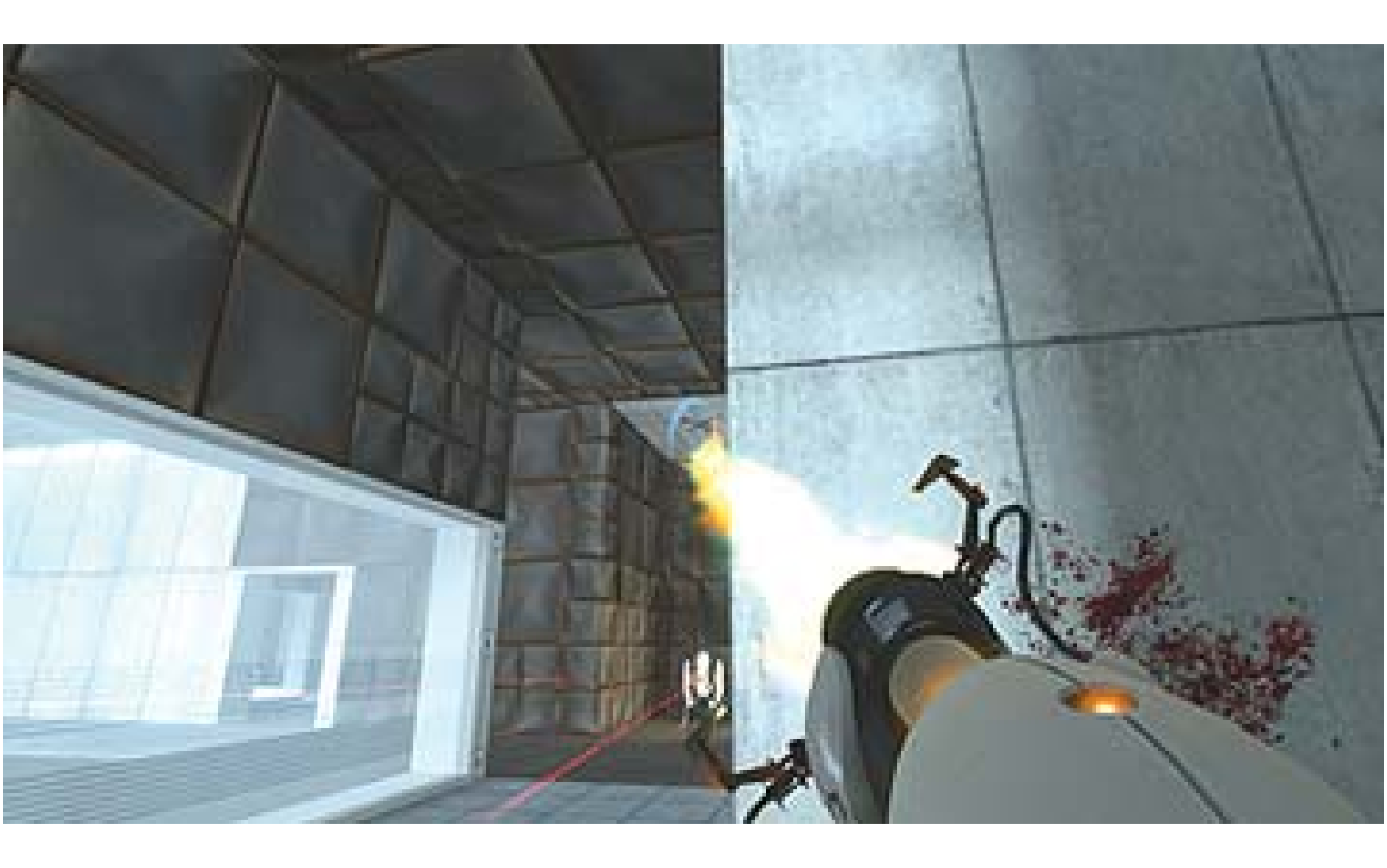


Getting rid of the next turret puts you between some nasty crossfire for a few seconds, so work fast. You see some Weighted Storage Cubes jammed between the wall and a protruding panel to your left as you approach a glass wall behind the next turret. Grab them and keep them handy.

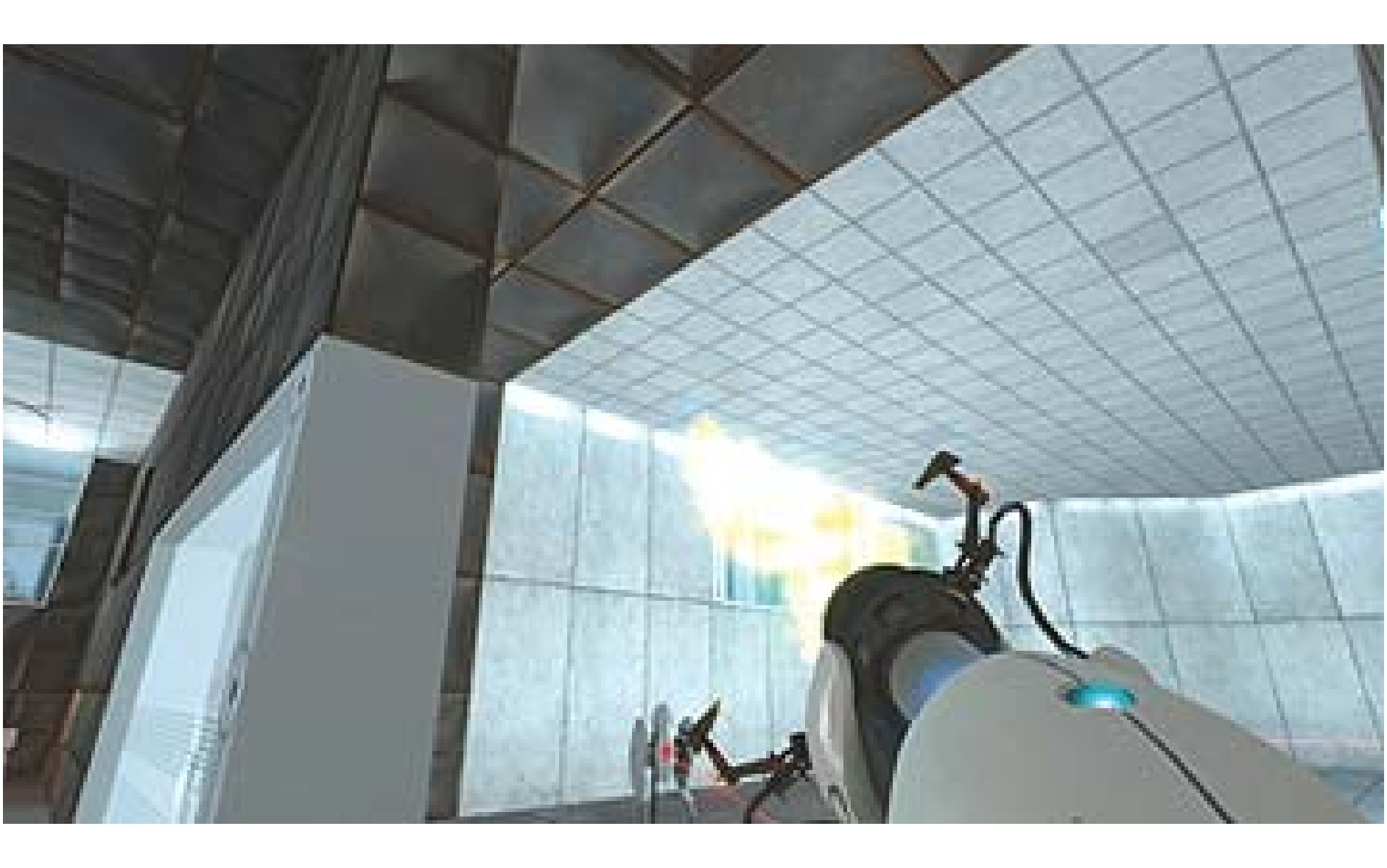




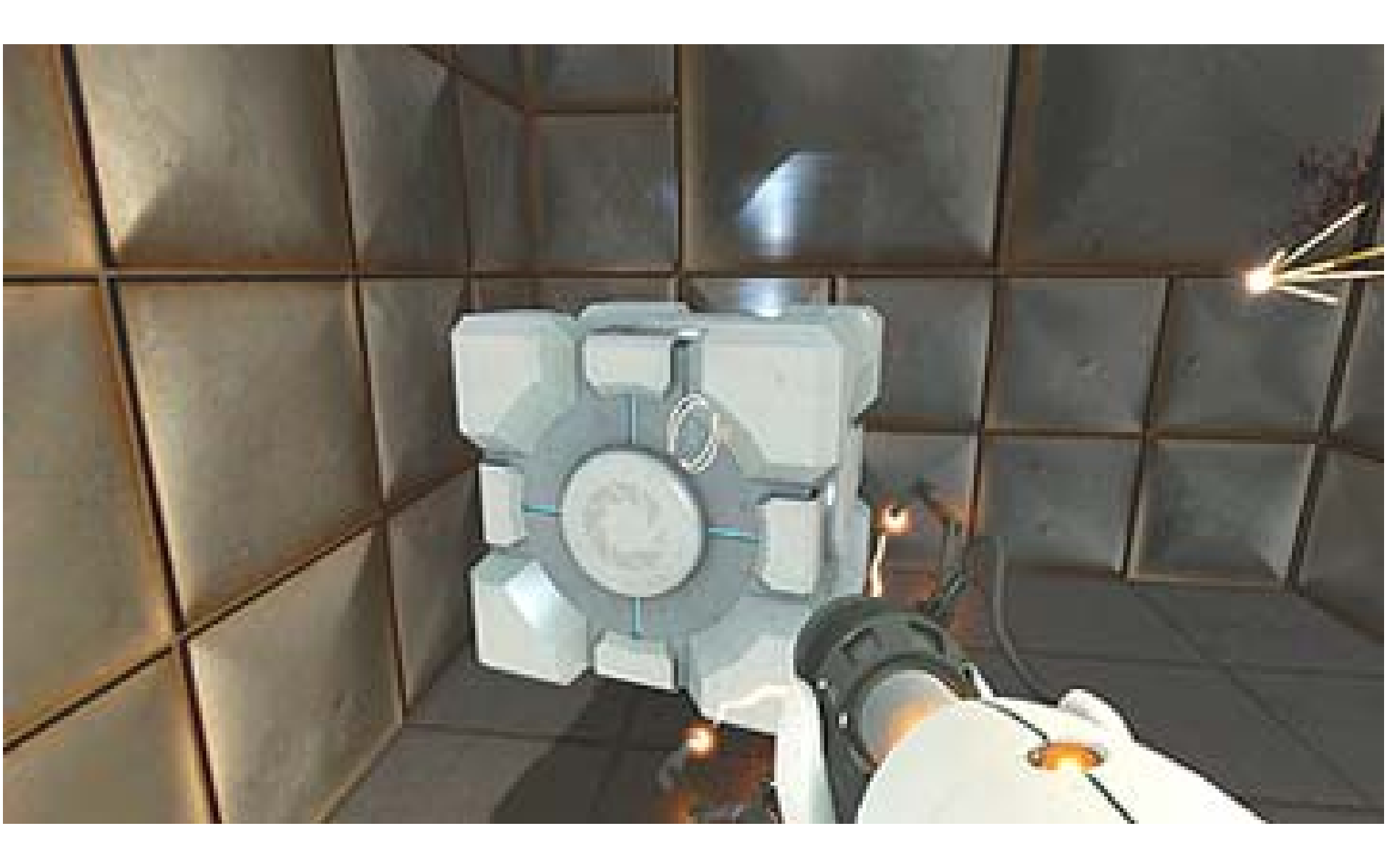
Now run quickly and turn left when you're in the turrets' line of sight. You can't place portals on the walls in this alcove, so look up at the ceiling, and aim your first portal at the conveniently marked "X." Retreat back to cover, place your second portal on a safe wall, and drop one of your Cubes on the turret's noggin.

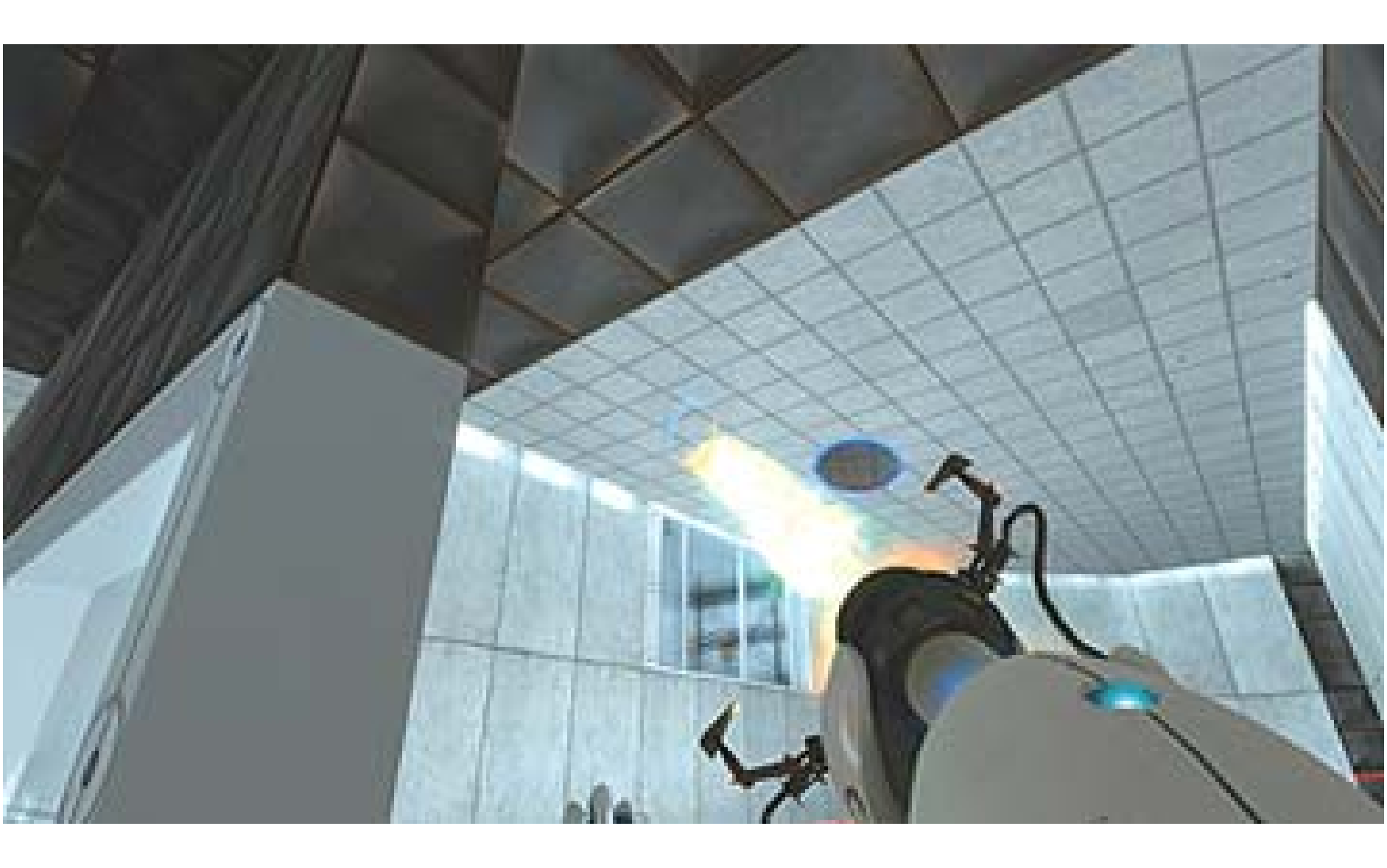


Repeat the process for the turret placed opposite the one you just dispatched. There's another "X" on the ceiling above it; aim here, and slam a Cube on its head.

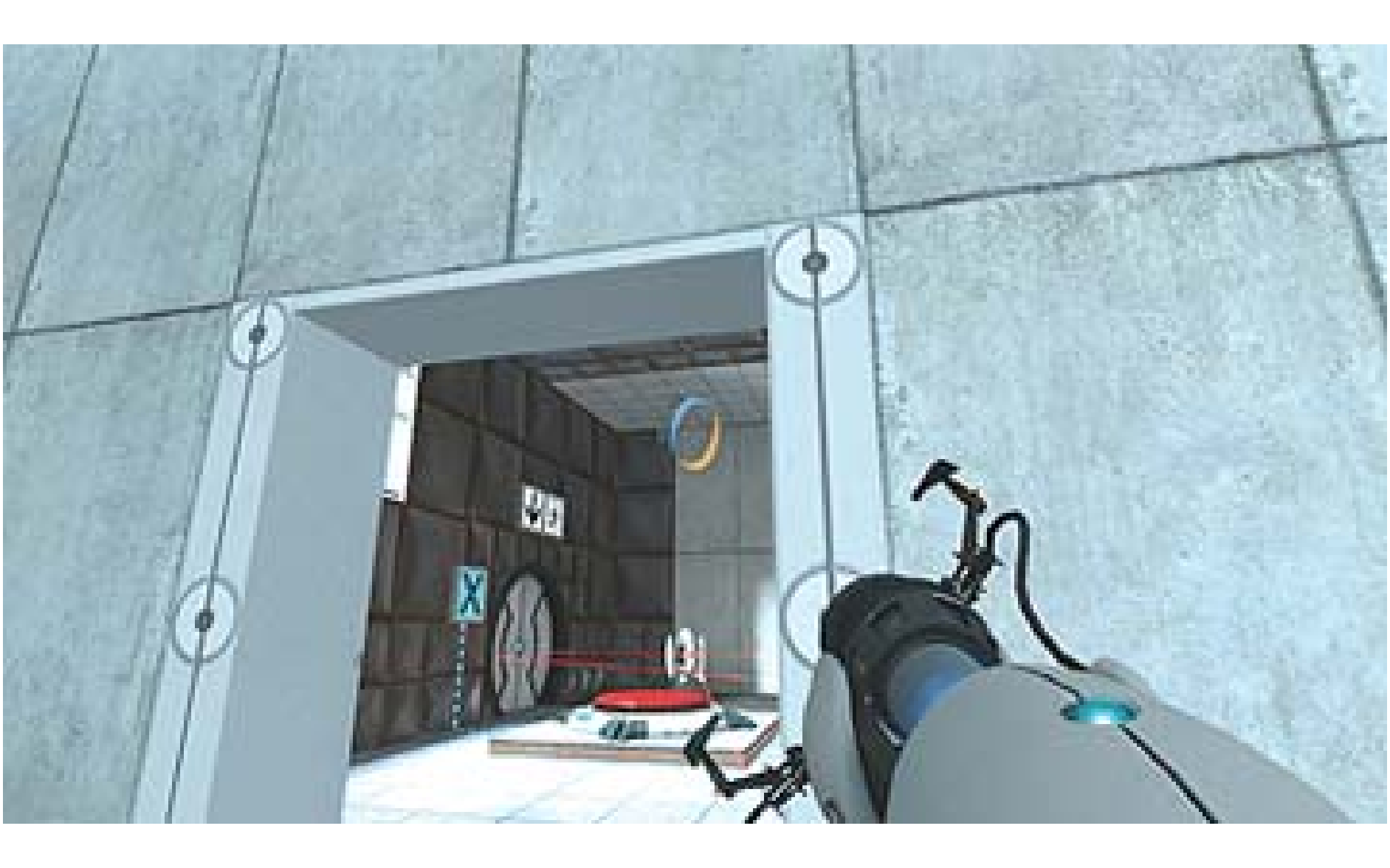


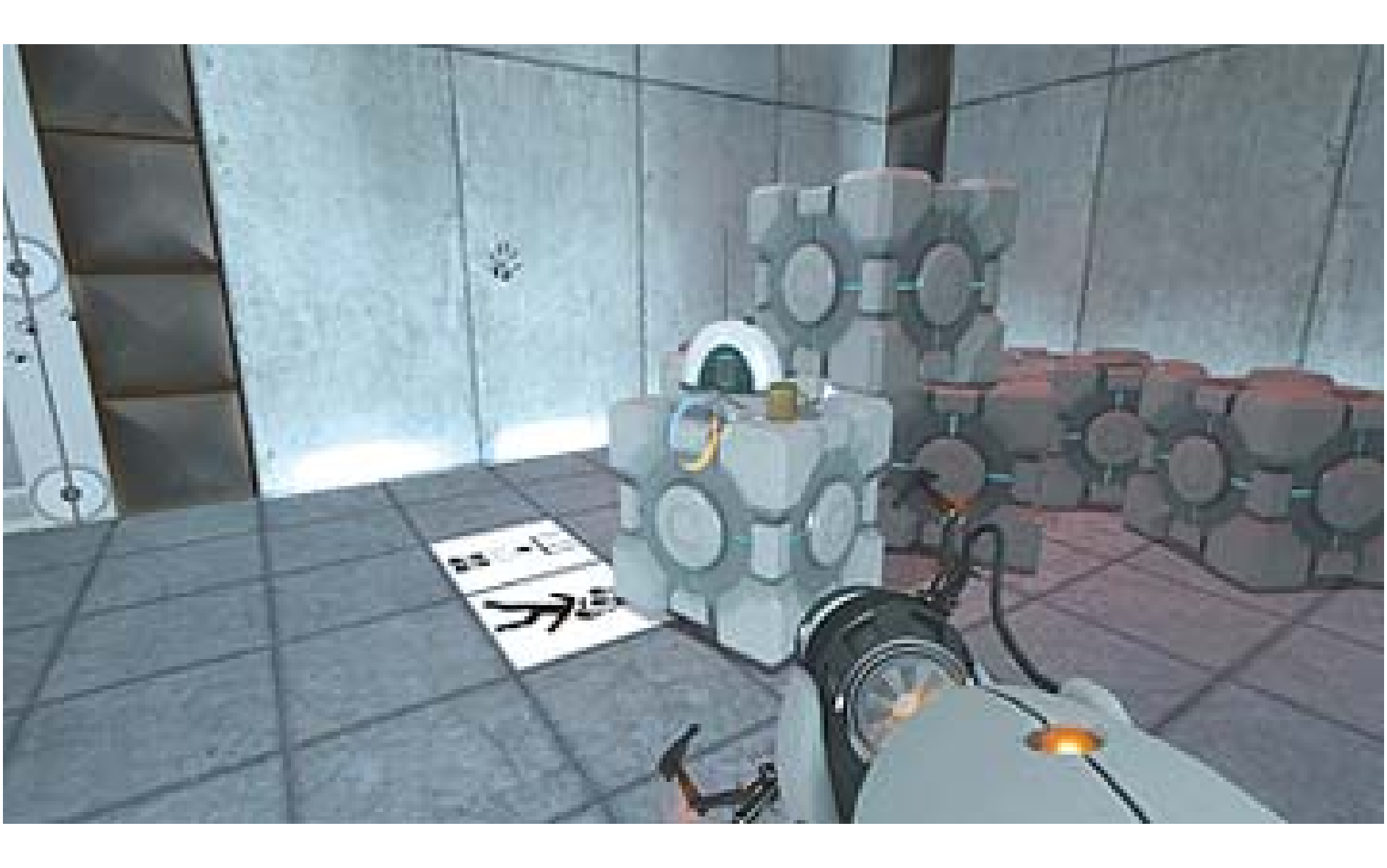
Move to the spot where the turret you just foiled stood. In the room that's now ahead of you, two turrets need taking out. There's no "X" marking the spot this time, though, so try your best to aim above their heads. When your first portal is open, retreat to the disabled turret's alcove, retrieve the Cube you used to kill it, and run somewhere safe. Open your second portal and drop the Cube on the first of the two active turrets.

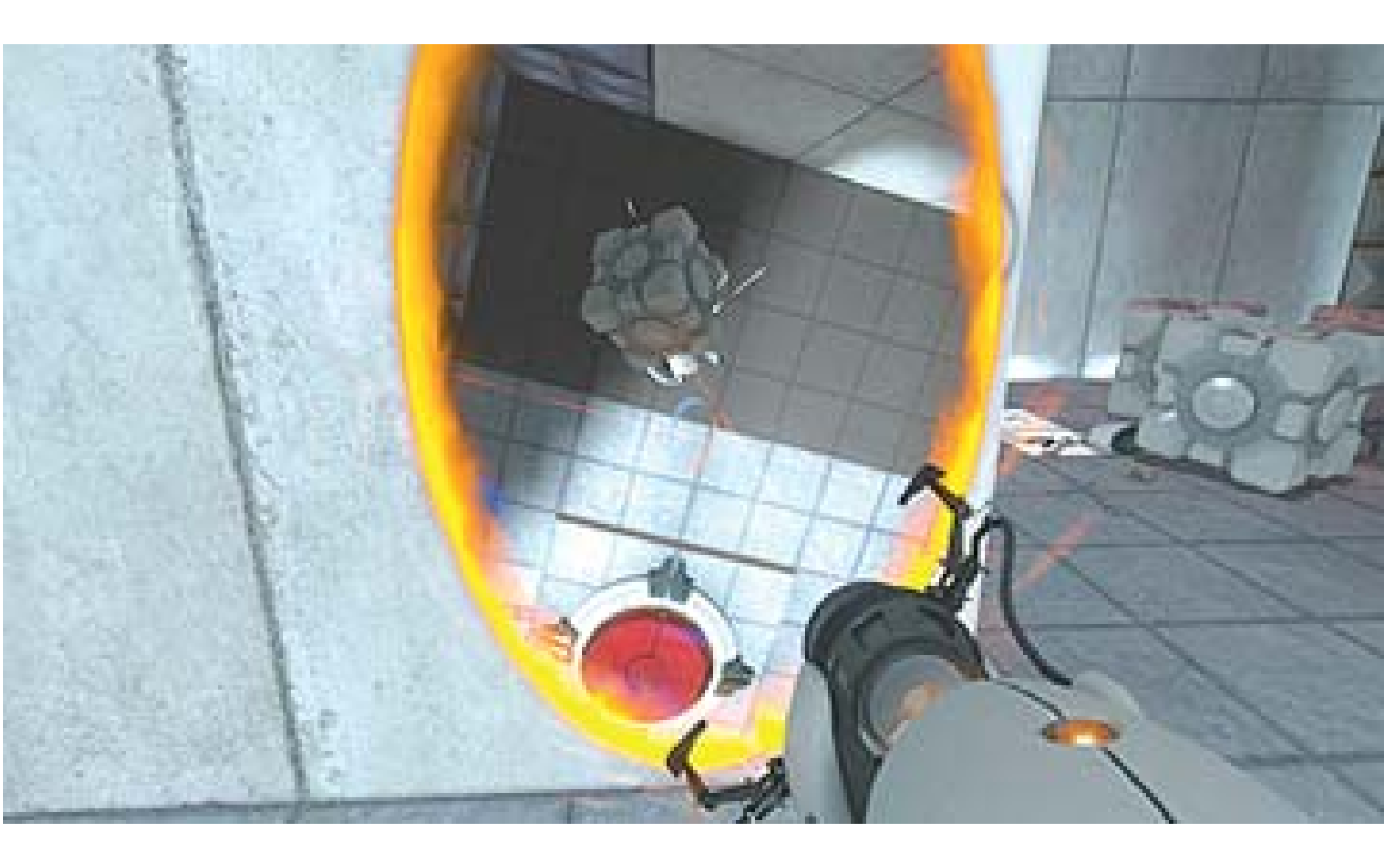




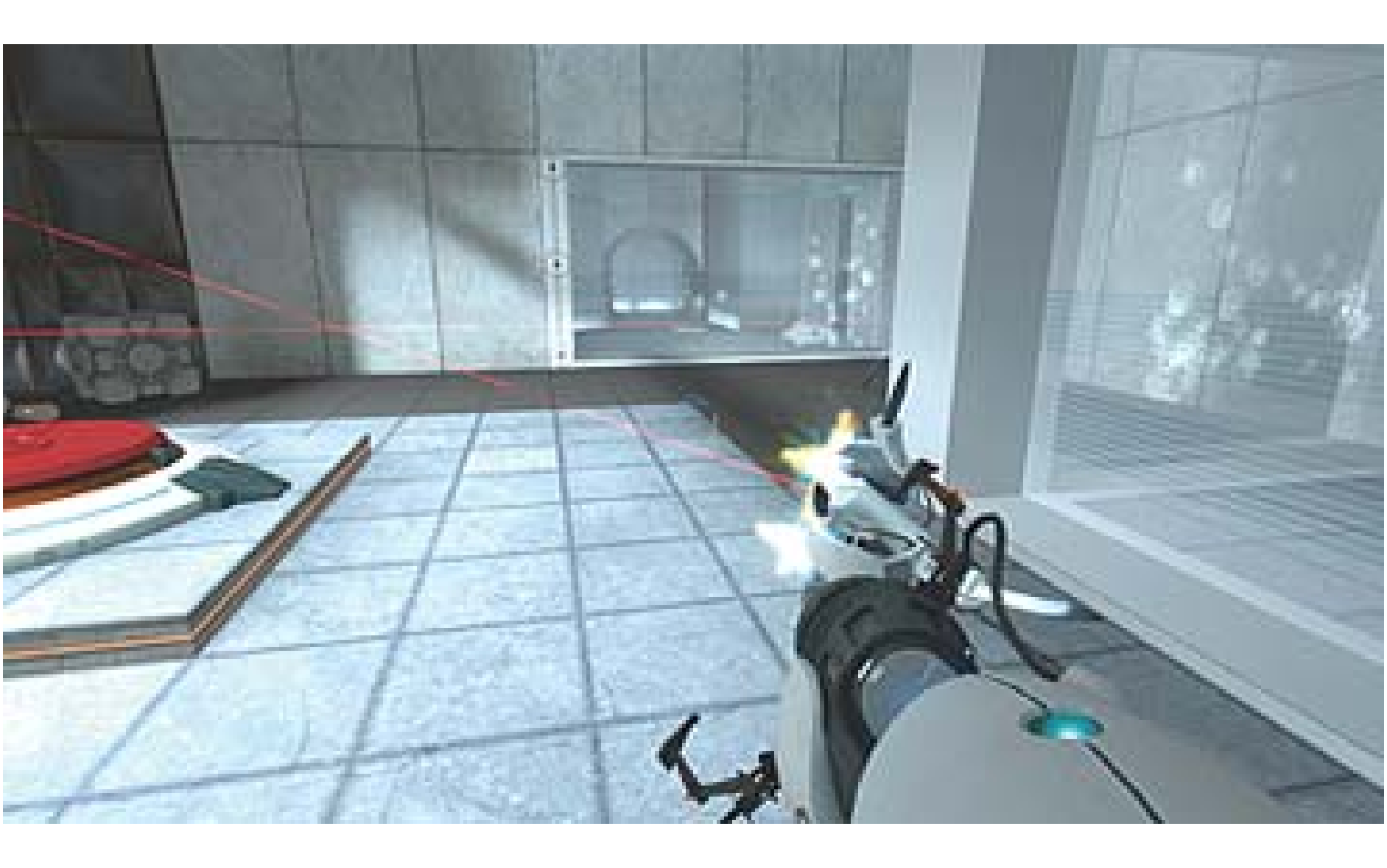
Another Cube is just opposite the room where the disabled turret lies. Run there, retrieve the Cube, and bring it back with you to the safe alcove. Aim your first portal above the second turret, run back before you're under too much fire, and drop the Cube on its head. You now have a little room to breathe.



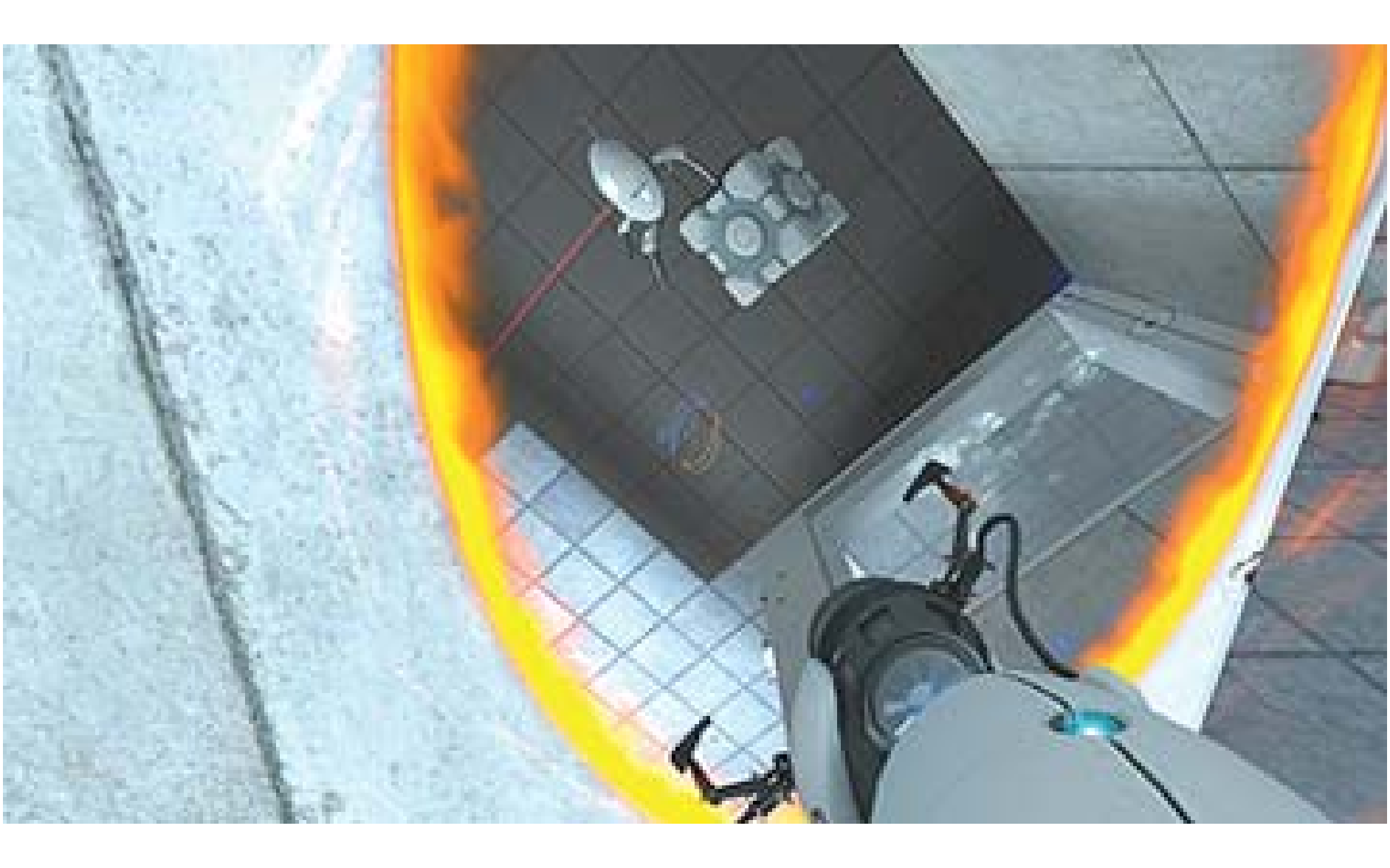


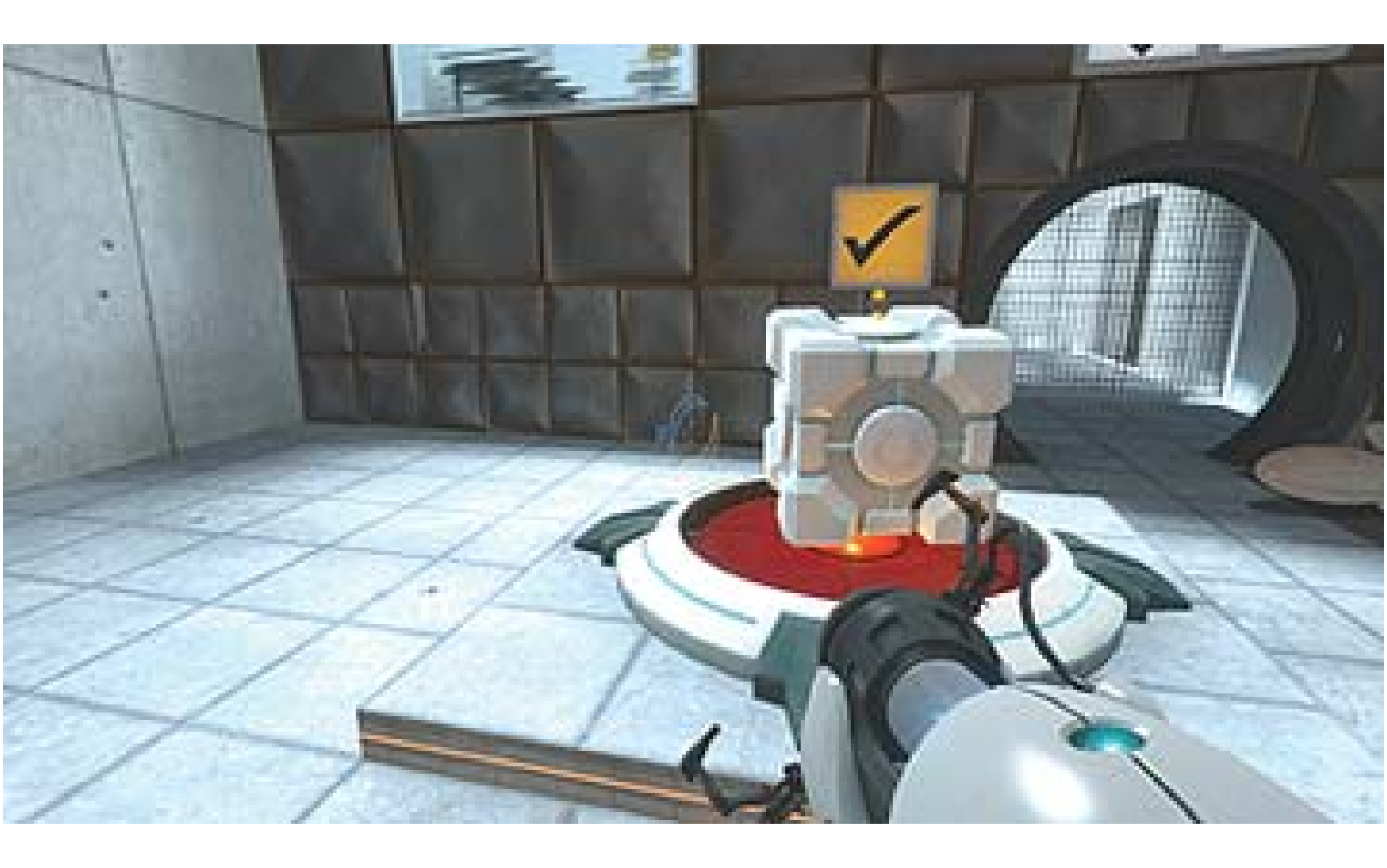


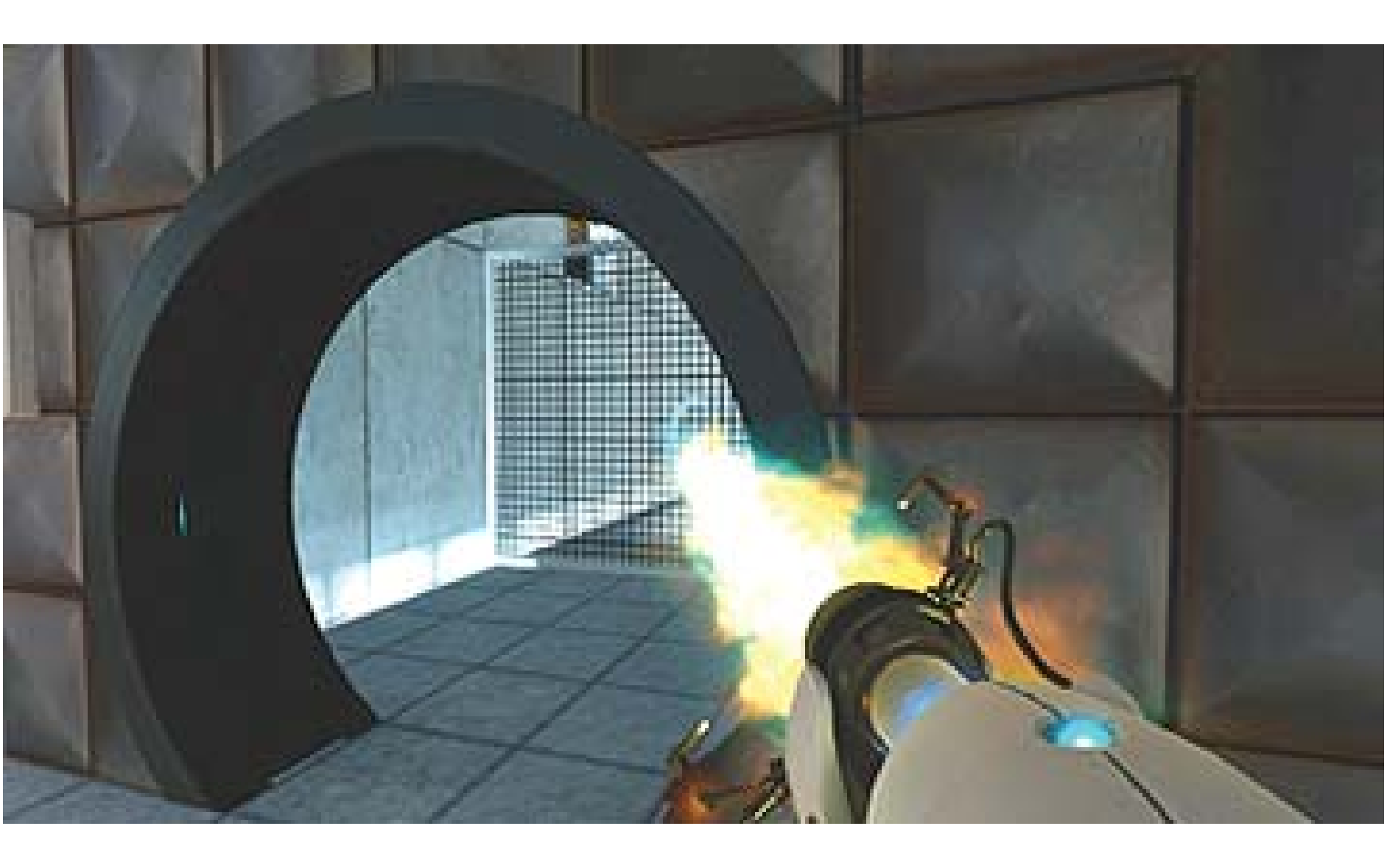
The now-empty chamber leads into two other rooms—one with a red button and three turrets, and another with a bunch of Cubes stacked upon each other, plus a radio that plays Portal's infectiously upbeat theme. Only one turret can harm you from the entrance to the button room, so take care of it first. Place your first portal above its head (note the "X" on the ceiling), and place your second on a safe wall. Seize a Cube, and bombs away!



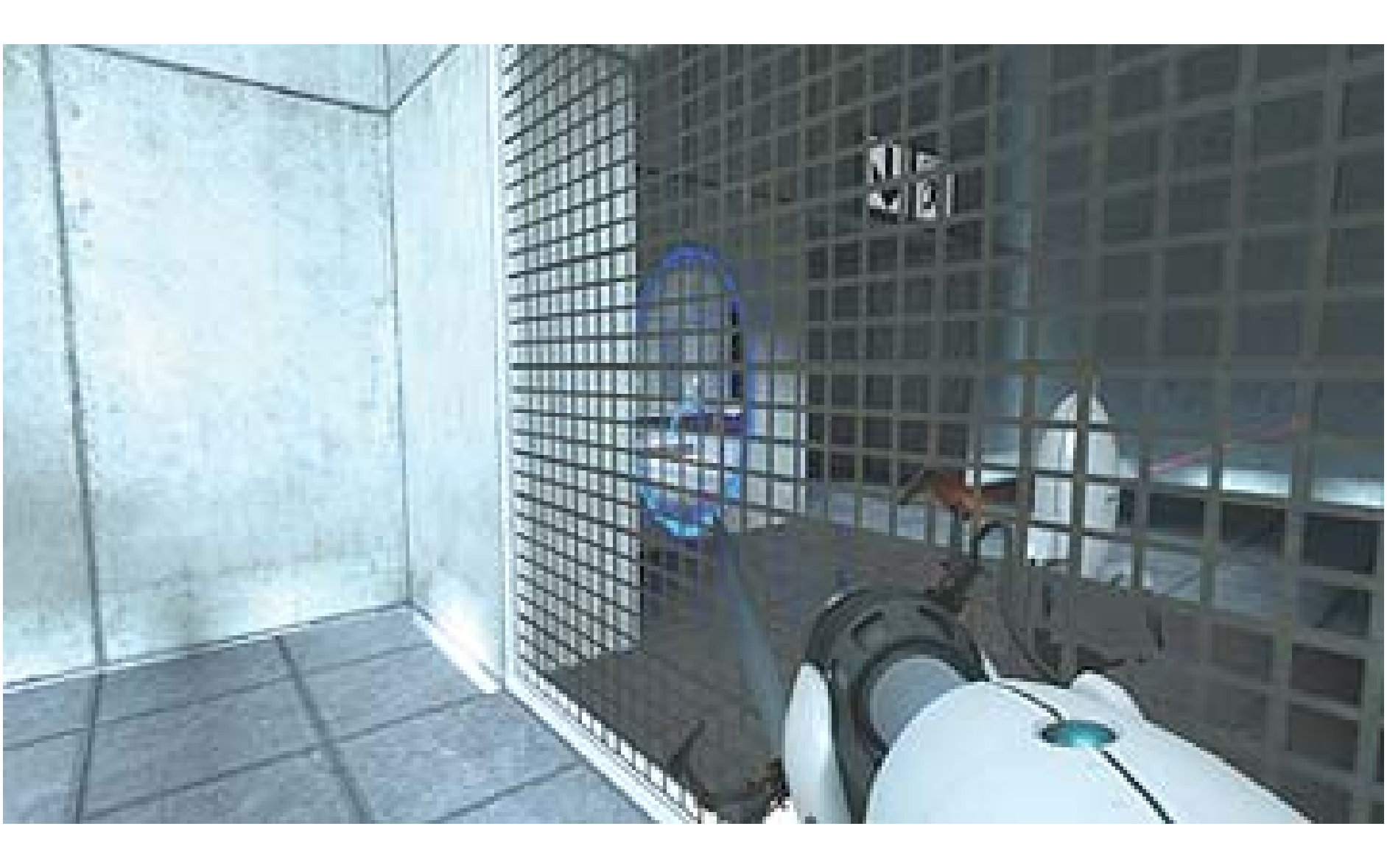
The next turret, aiming squarely at the wall to your left, poses no threat. Simply tip it over. If you're feeling brave, you can do the same to the next one, but since its stationed back in an alcove, you're going to take some fire. If you want to play it safe, place your first portal on the "X" above it, and drop a Cube through your second portal back in the previous chamber. Now that the room is turret-free, place a Cube on the red button, and immediately take cover behind the wall adjacent to the blast doors—the open doors put you dead in the sights of the turret behind them.

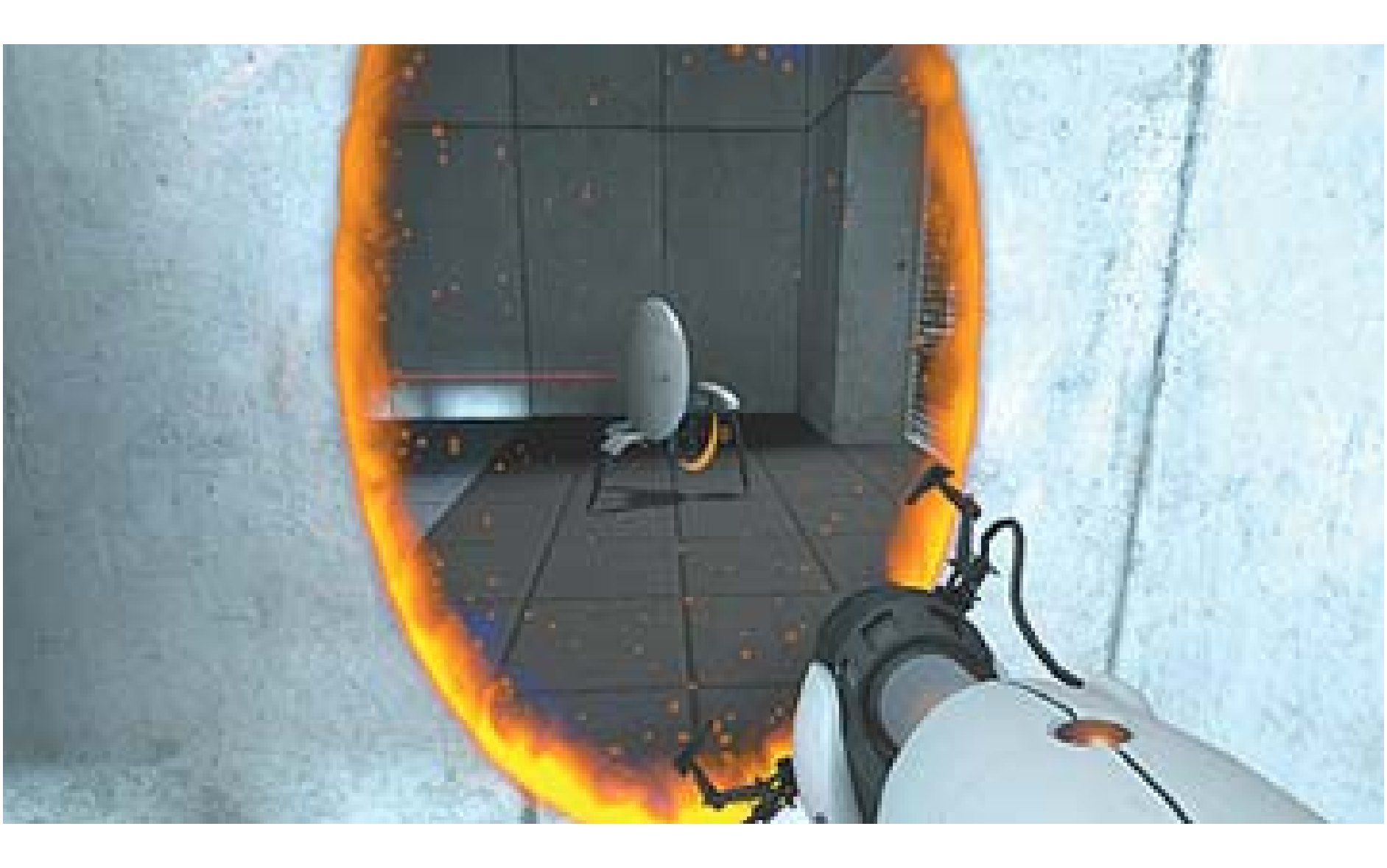






The turret is behind a mesh partition, so just get in its sights for a second, and a fire a portal next to it. Place your second portal from behind cover, walk through, and tip the turret over.



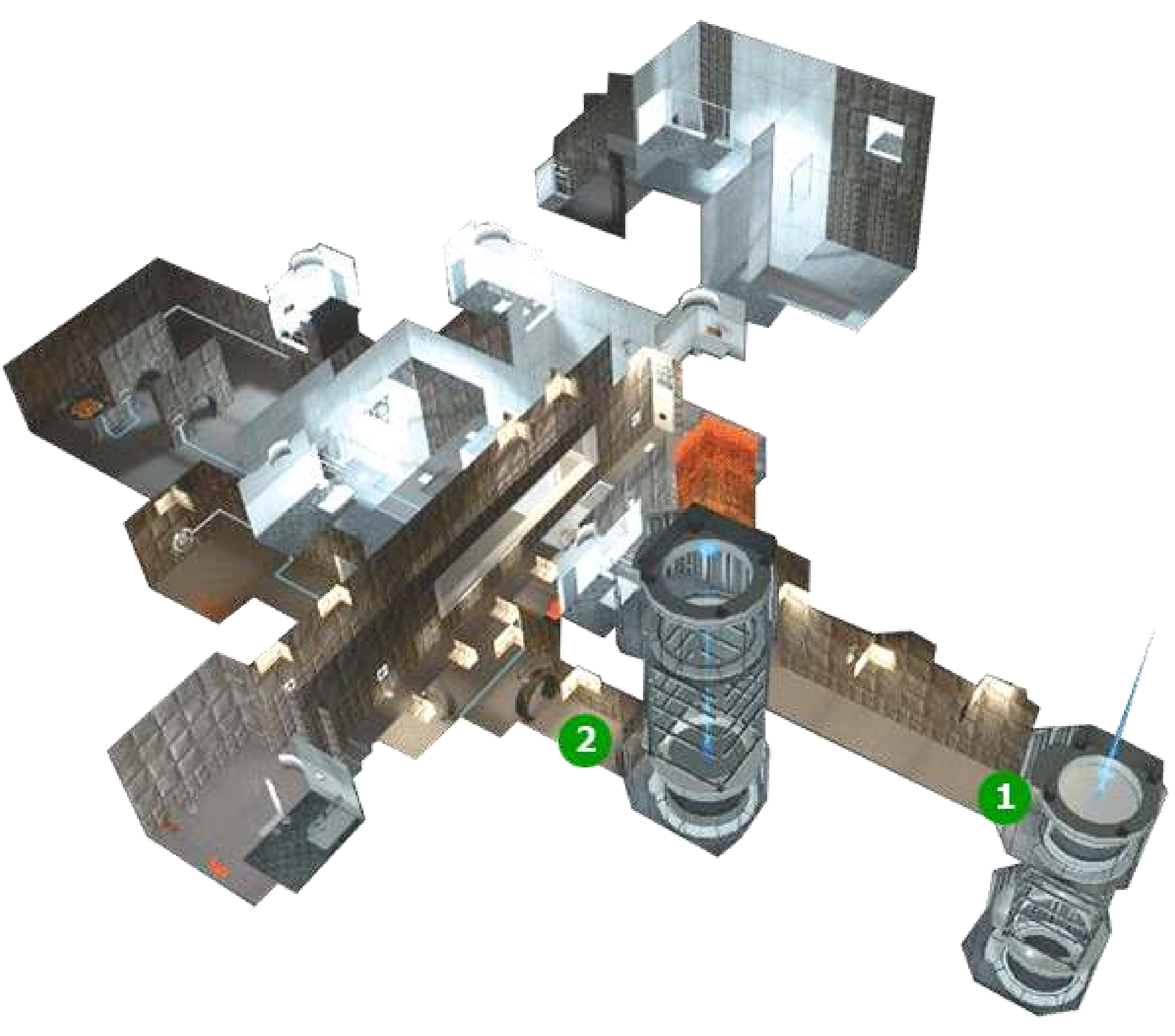


The last turret is visible from here. Repeat the process: Place your first portal beside the turret, your second in the current room, walk through, and eliminate the turret. You are now free to exit Test Chamber 16.

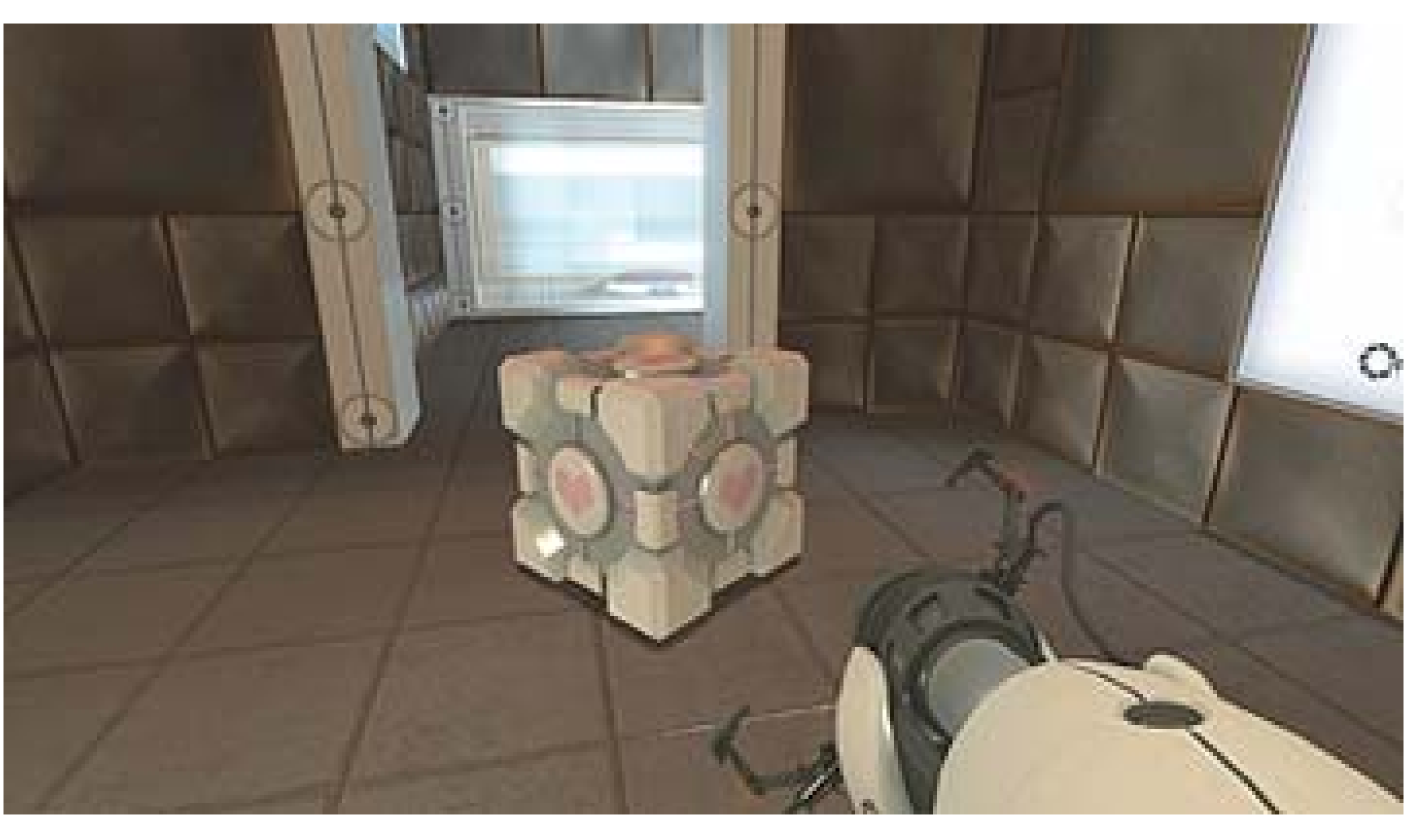
Remember to try the advanced and portal challenge strategy sections of this chamber

Test Chambers

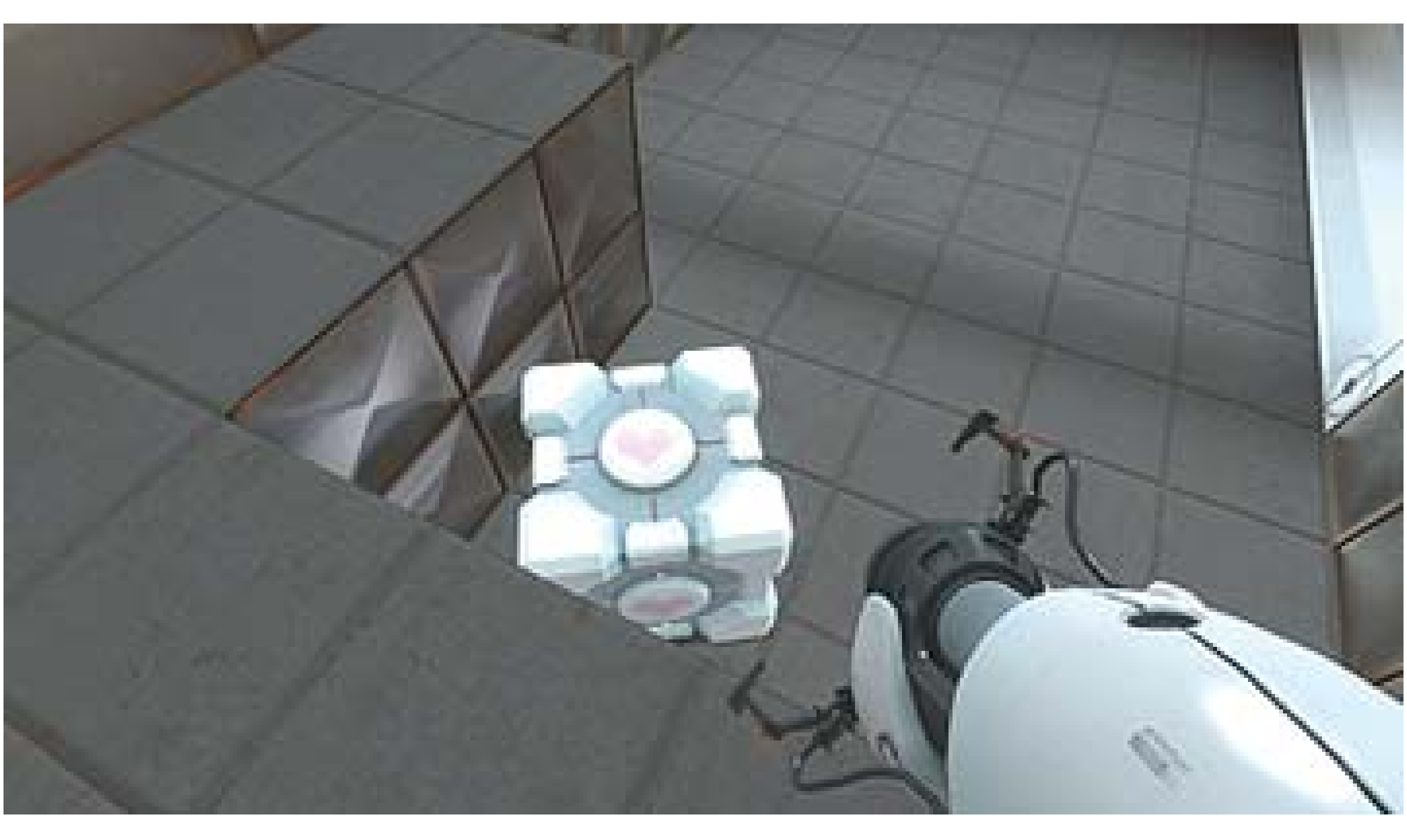
Chamber 17



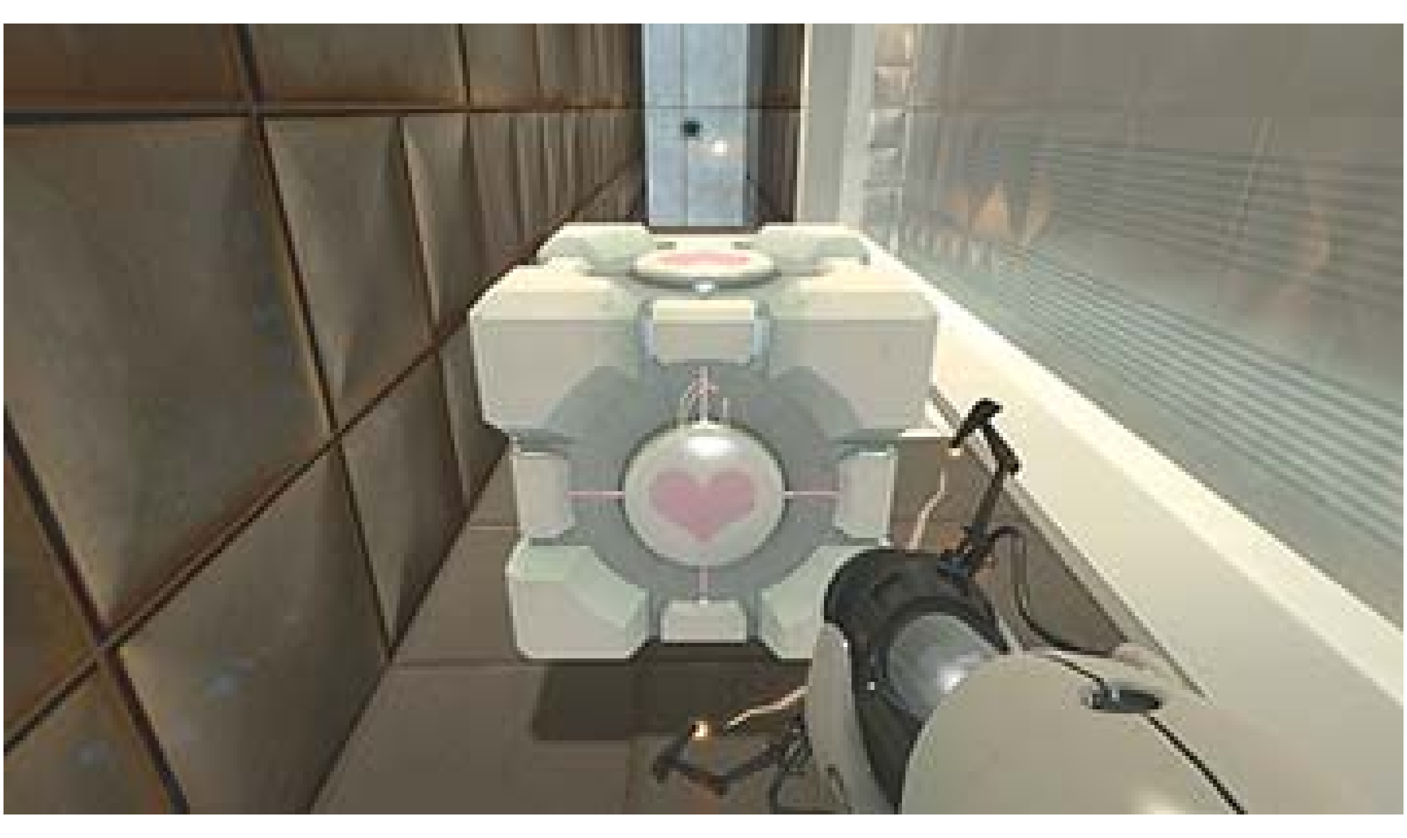
Map Legend
1. Test Chamber 17 Start Point
2. TEst Chamber 17 End Point



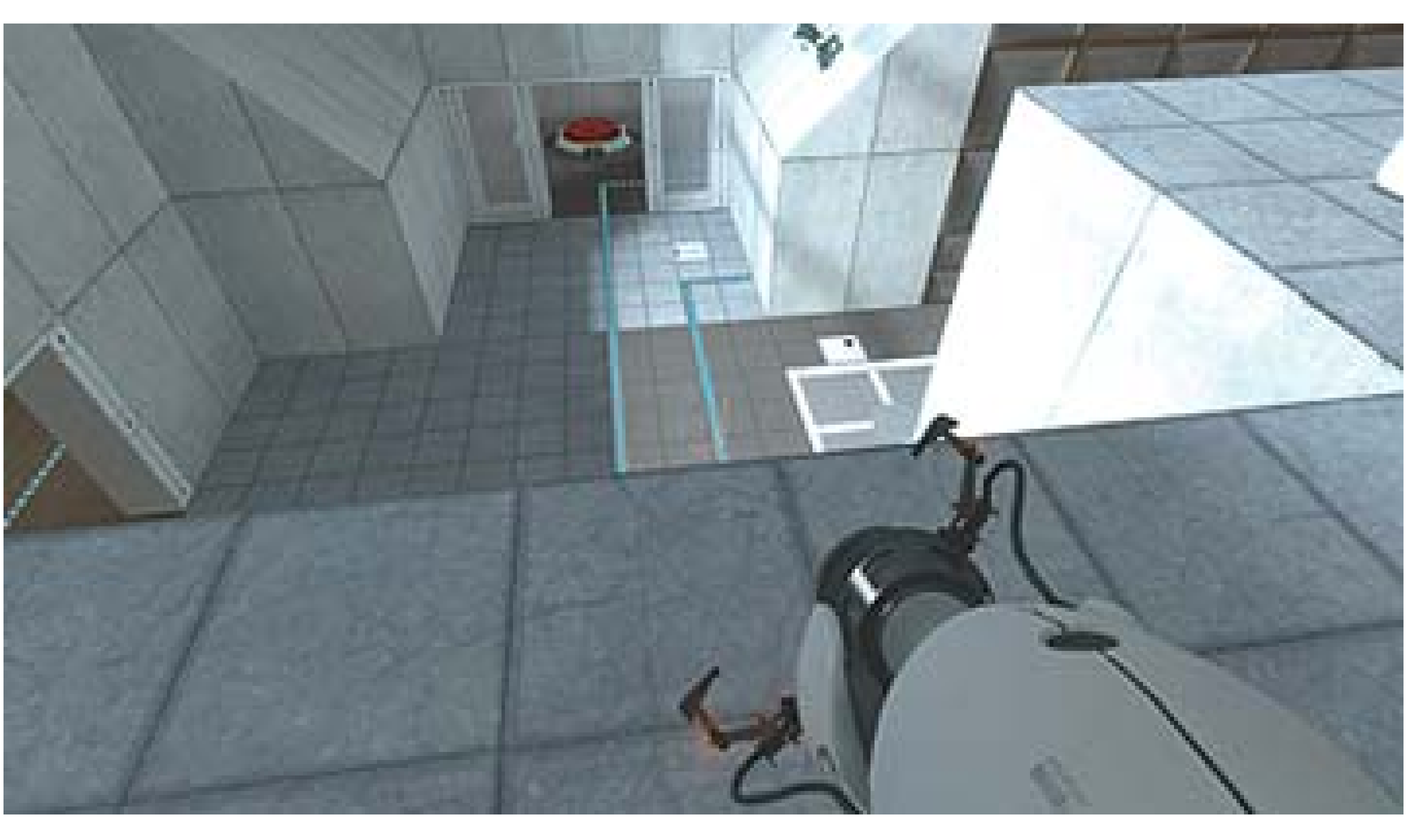
As you exit the elevator into Test Chamber 17, you see a Vital Apparatus Vent before you. When you approach it, it spits out a Weighted Companion Cube. For all intents and purposes, the Companion Cube is identical to any regular old Storage Cube, except for the hearts stamped onto every side. These indicate that you must nurture it; indeed, it's you're only friend in this cold, impersonal world. Pick it up and carry it with you. Just don't get too attached to it; some harsh realities await.

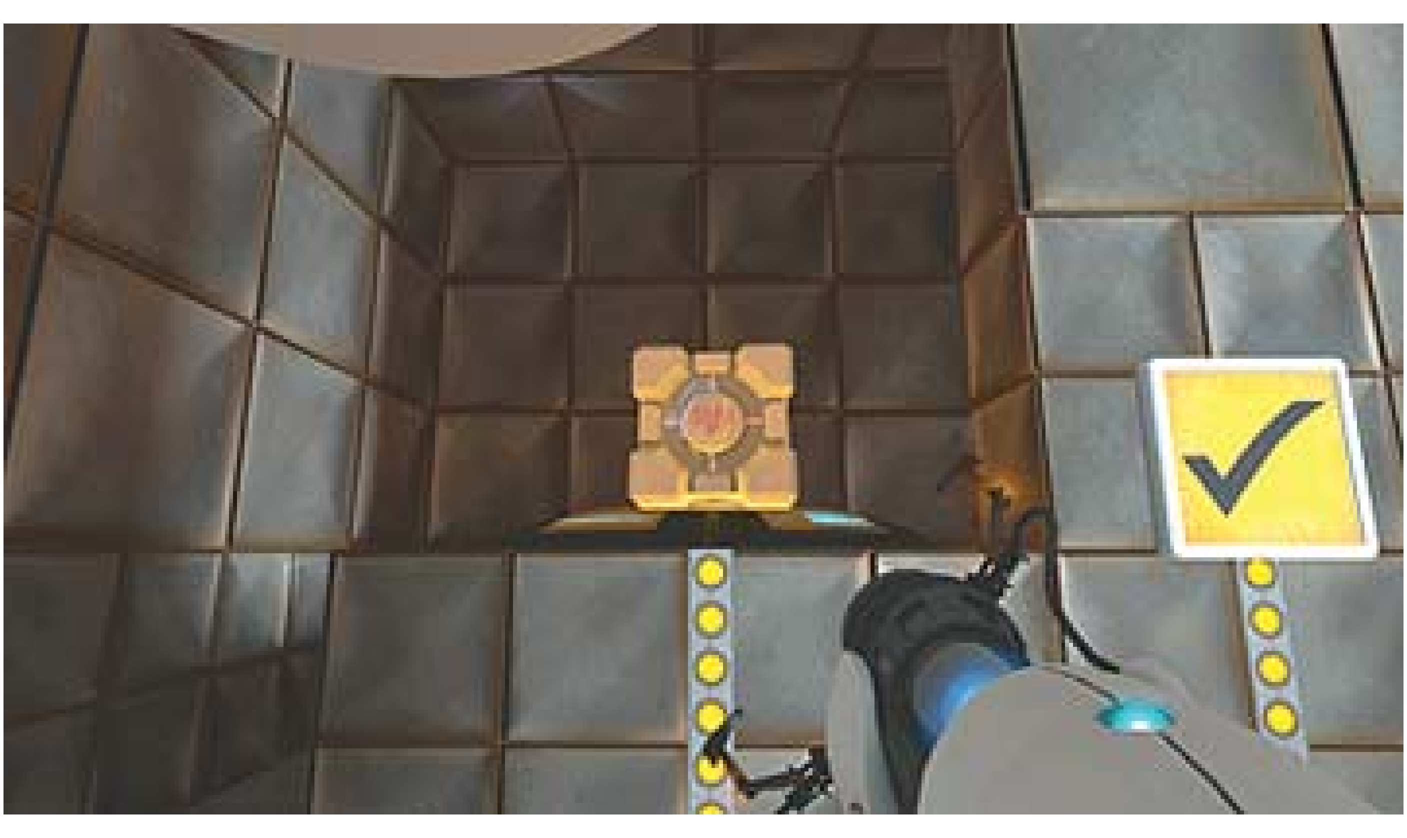


Proceed to the next chamber and use the Cube as a step to get you up the unreachable ledges. Don't forget to retrieve the Companion Cube when you're up top.

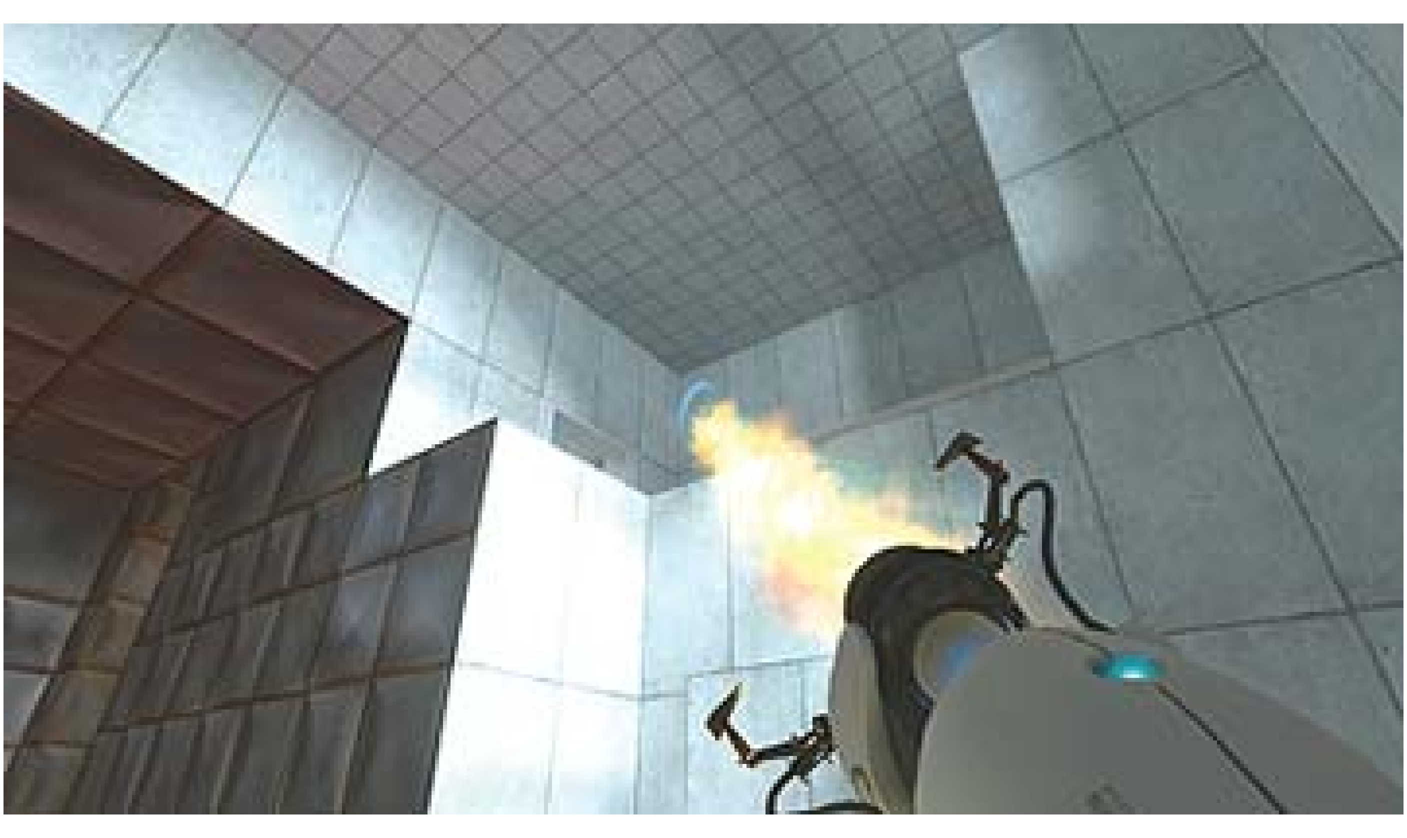


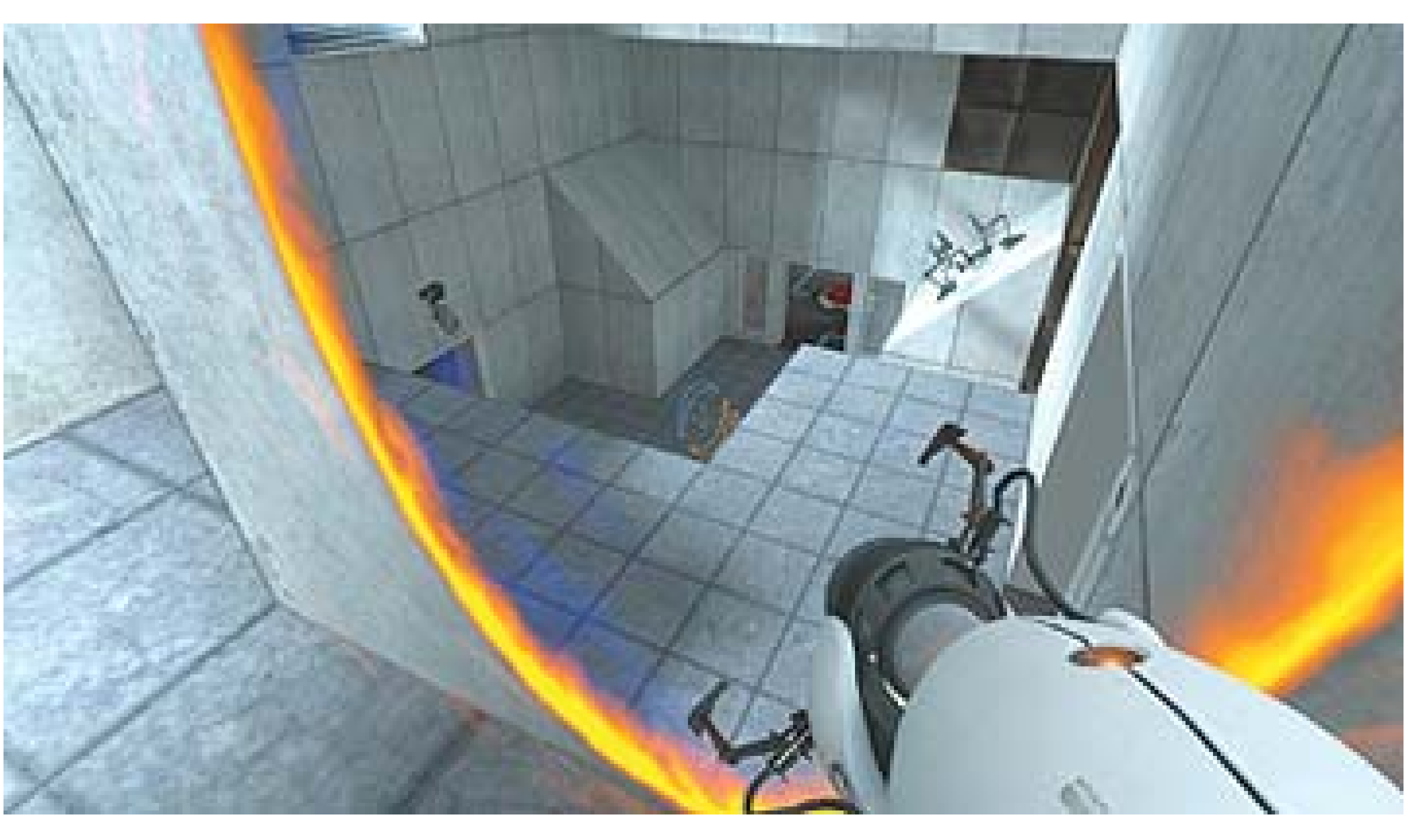
Walk down the long hallway with a Ball Launcher at the end of it, and hold the Cube in front of you—it deflects the energy ball that's flying on a collision course. Turn right, after you emerge from that hallway, and wait until the second Launcher shoots its ball. Follow it down the second hallway, again, holding your Cube in front of you to deflect the energy ball when it rebounds off the far wall.





When you exit the hallway, you see a room to your right with red button on the ground. Jump down there with the Companion Cube in tow. Skip that first button for now and place the Cube on the button that's elevated on a short pedestal at the rear of the room. Exit the room.





Get back up to the ledge that you dropped off of a moment ago by placing your first portal near the exit to the hallway, and your second on the protruding panel that's opposite the button room.

Go to the spot at the end of the hallway where the energy ball makes impact. Place your first portal on the charred surface. Next, run out of the tunnel, jump off the ledge, and place your second portal on the protruding panel facing the button room. Run into the room and stand on the button nearest the entrance. The energy ball whizzes past you as it comes out of your second portal, so give it a wide berth. This activates the first of the three lifts in this main chamber.

To activate the second lift, get back up the ledge and run back to the first hallway. Aim your first portal at the hallway's far end, where the energy ball fired from the first Catcher you passed on your way in makes an impact. Make sure that the Launcher doesn't blast you from behind! Once the portal is set, run back to main the main chamber and place your second portal on the inclined surface opposite the Catcher near the button room. Once it emerges through your second portal, the ball ricochets off the ceiling and into the Catcher's maws. This activates the second lift.

Go back into the button room and retrieve your Companion Cube. As you exit the room, you see another room to your right. Go in and prepare yourself for some risky business. A Launcher is very close to a Catcher in this room. The only way to complete the puzzle is to deflect the energy ball with your Cube. To do so, simply stand in energy ball's path, facing the Catcher. After some trial and error, the ball goes where it needs to. The Weighted Companion Cube won't be hurt, but you may be.

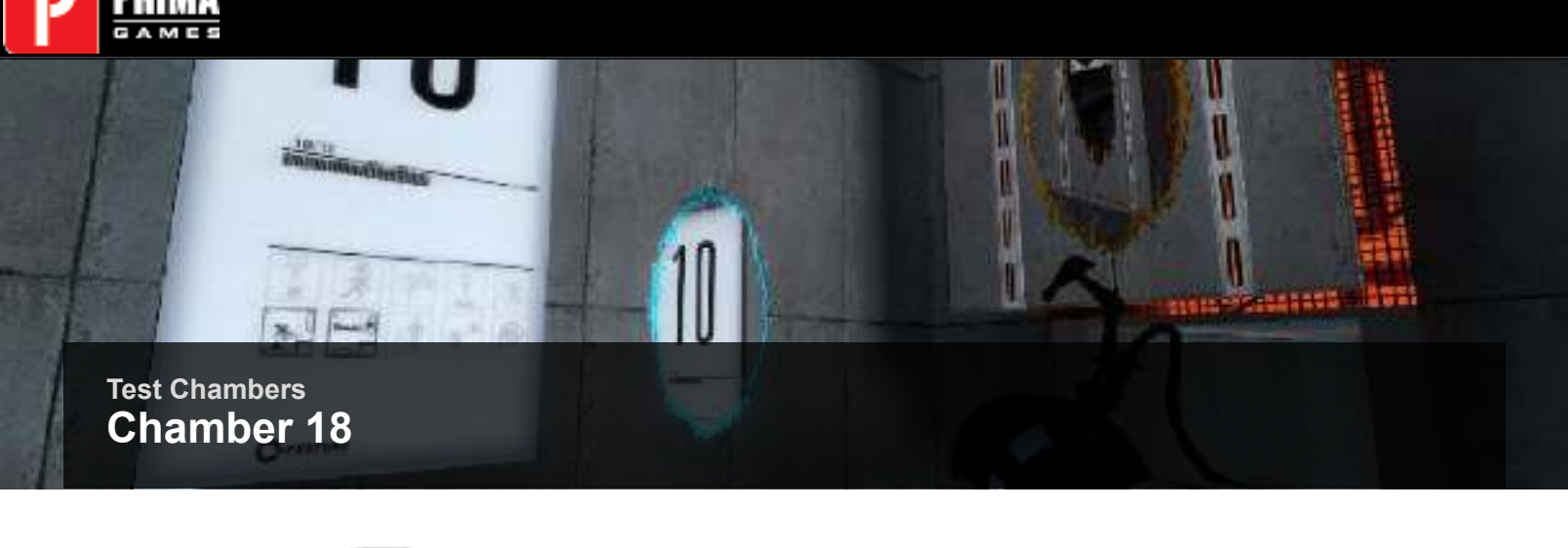
Solving the ball puzzle has activated the third lift. Portal back up to the top of the chamber and don't forget your Cube. With all three lifts activated, you're now able to get into the final chamber. Prepare yourself for a tearful farewell.

When you travel down the hall and up the steps, you see a red button on the ground. Depress it with the Cube and travel beyond the blast doors.

That thing you just passed en route to the switch you see at the end of the hall is an incinerator. Bet you can guess what's coming. Hit the switch. The incinerator's grate is now open. You know what you have to do.

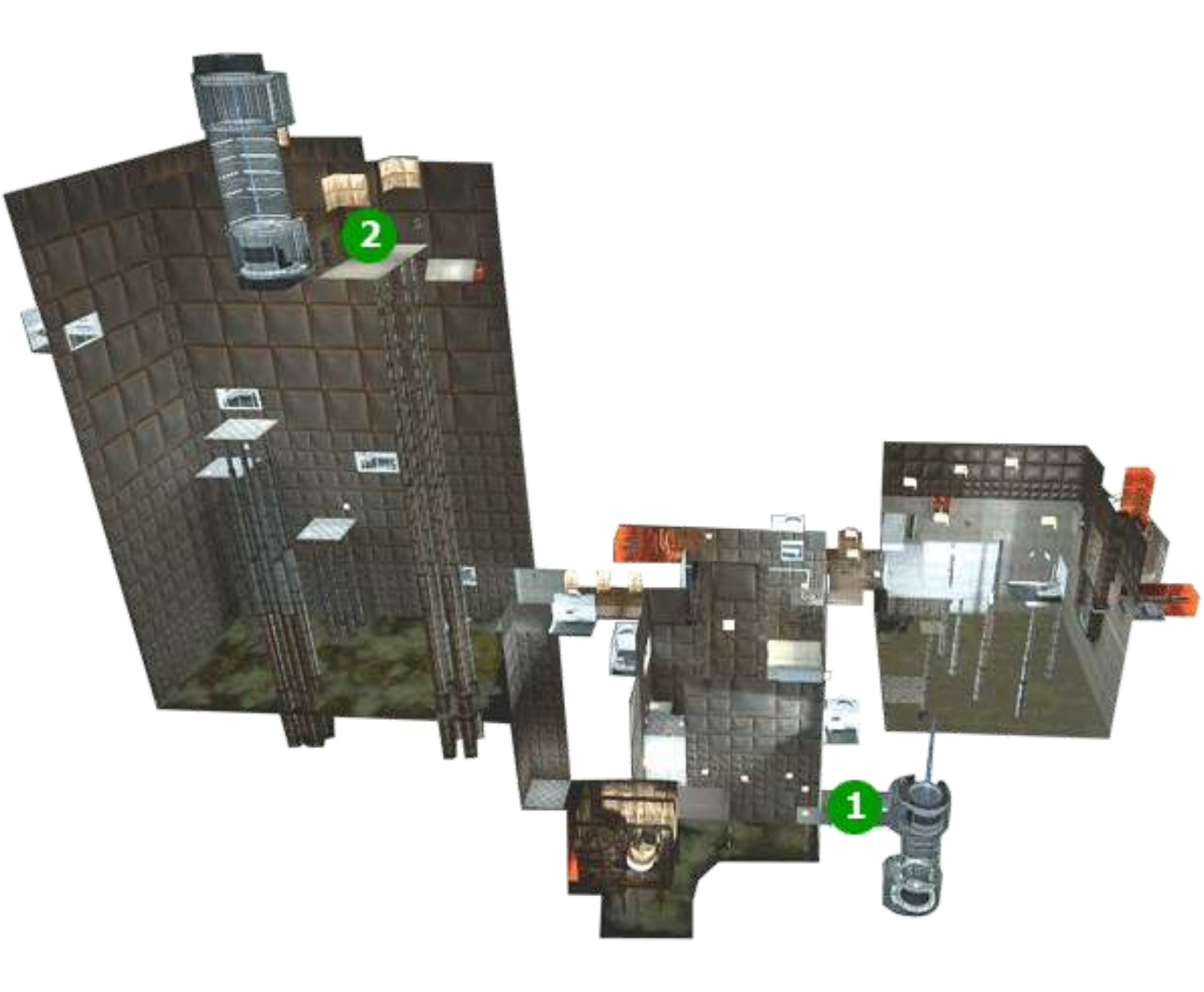
Don't worry, nothing will happen if you retrieve the Cube from the button and drop it into the incinerator. Nothing, except murder! Just kidding. Remember: It's just a Cube. On the bright side, you'll have plenty more chances to incinerate deserving inanimate objects in due time. Incinerating the Weighted Companion Cube unlocks the exit doors leading out of Test Chamber 17.

Remember to try the Advanced and Portal Challenge Strategy Sections



Test Chambers

Chamber 18



Map Legend
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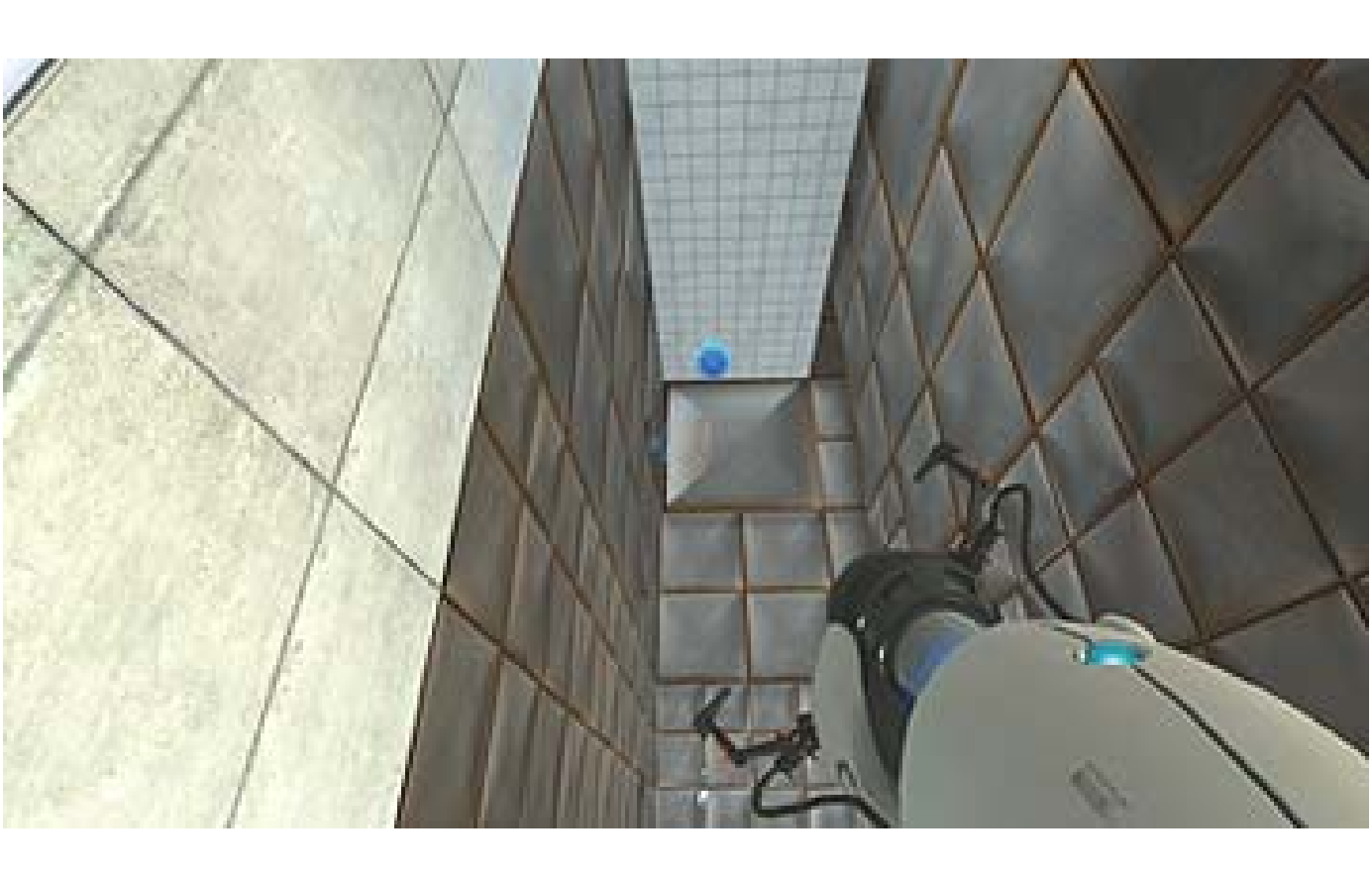
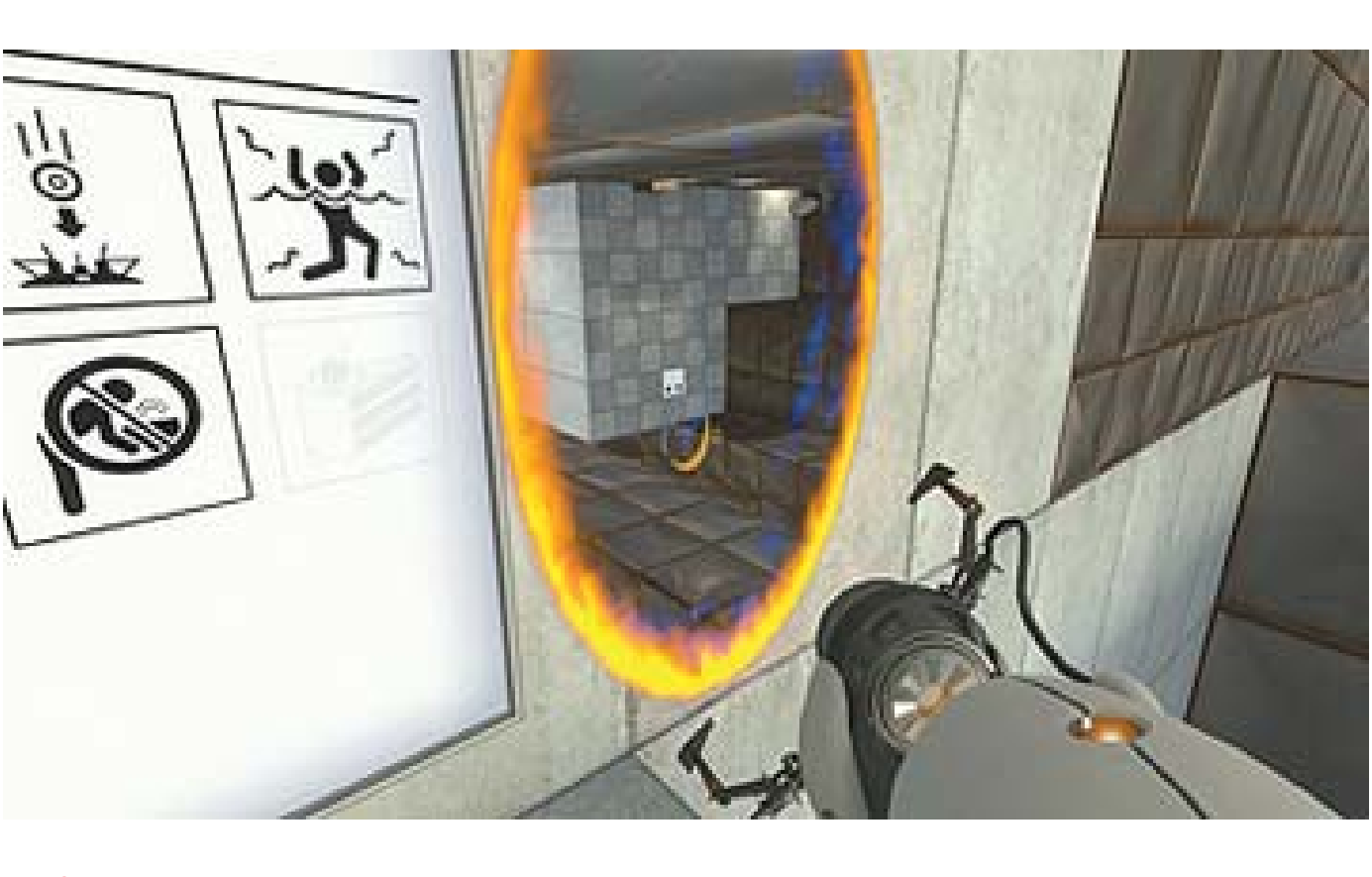
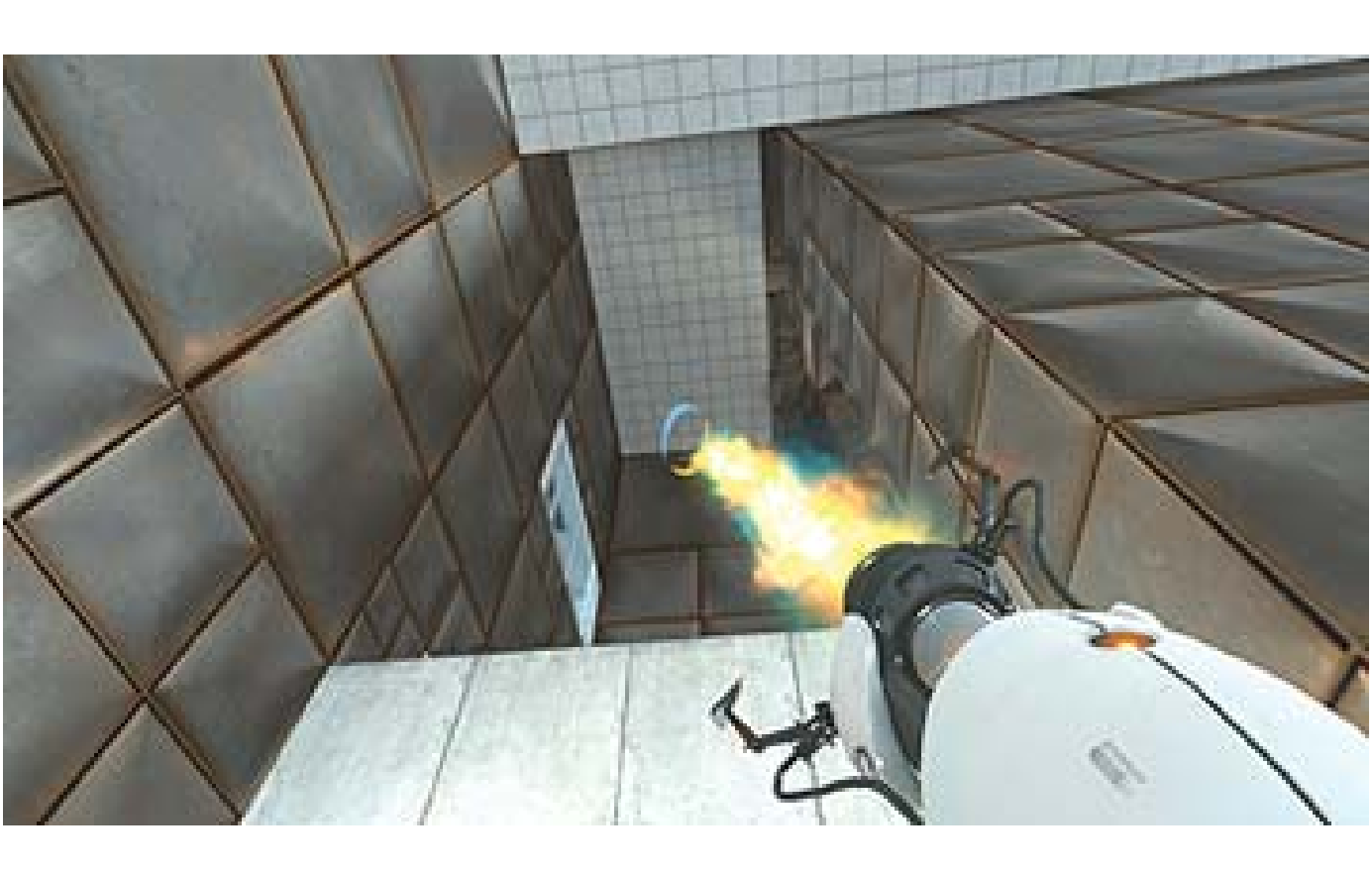
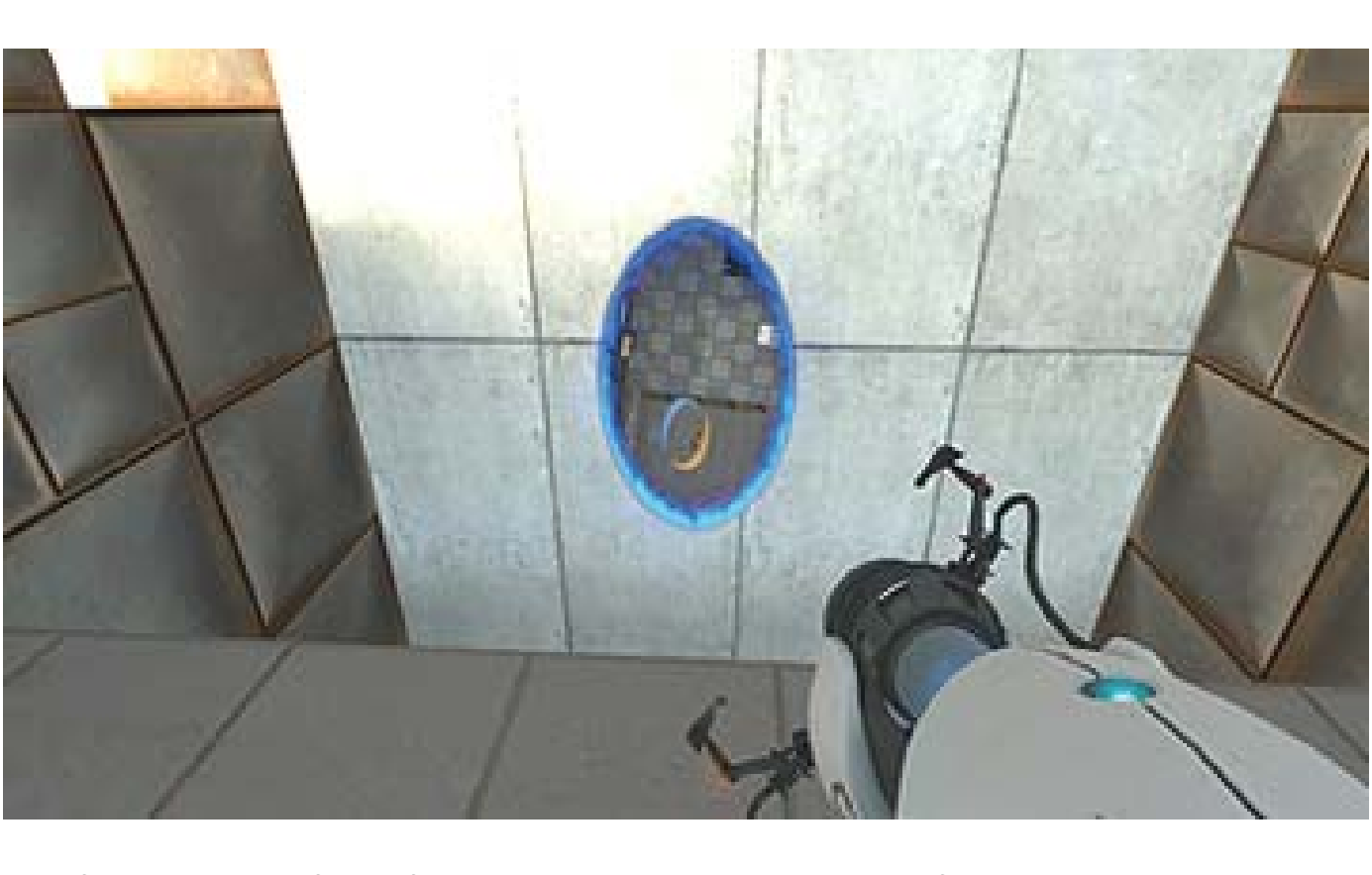
2.Test Chamber 2 End Point



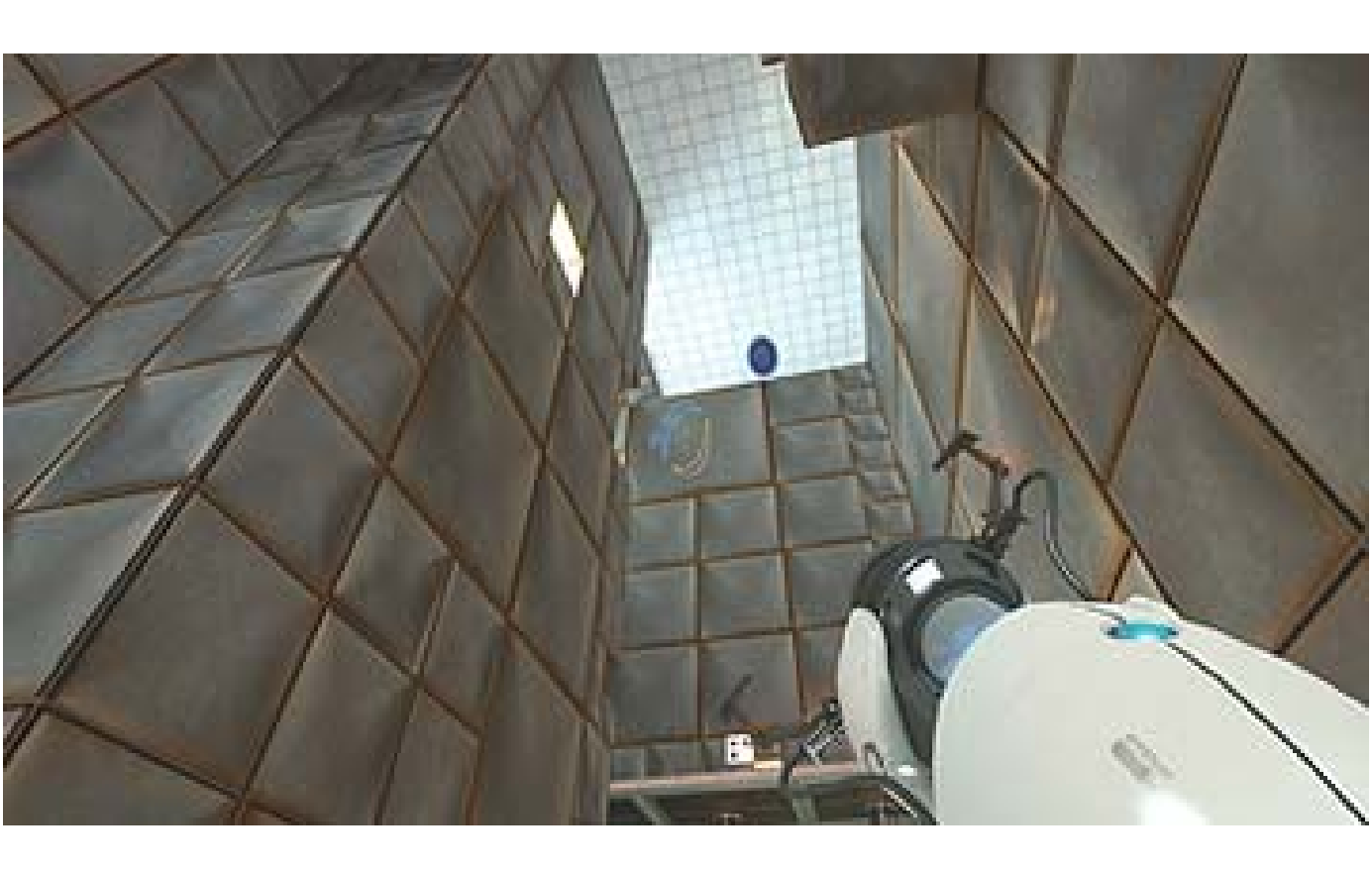


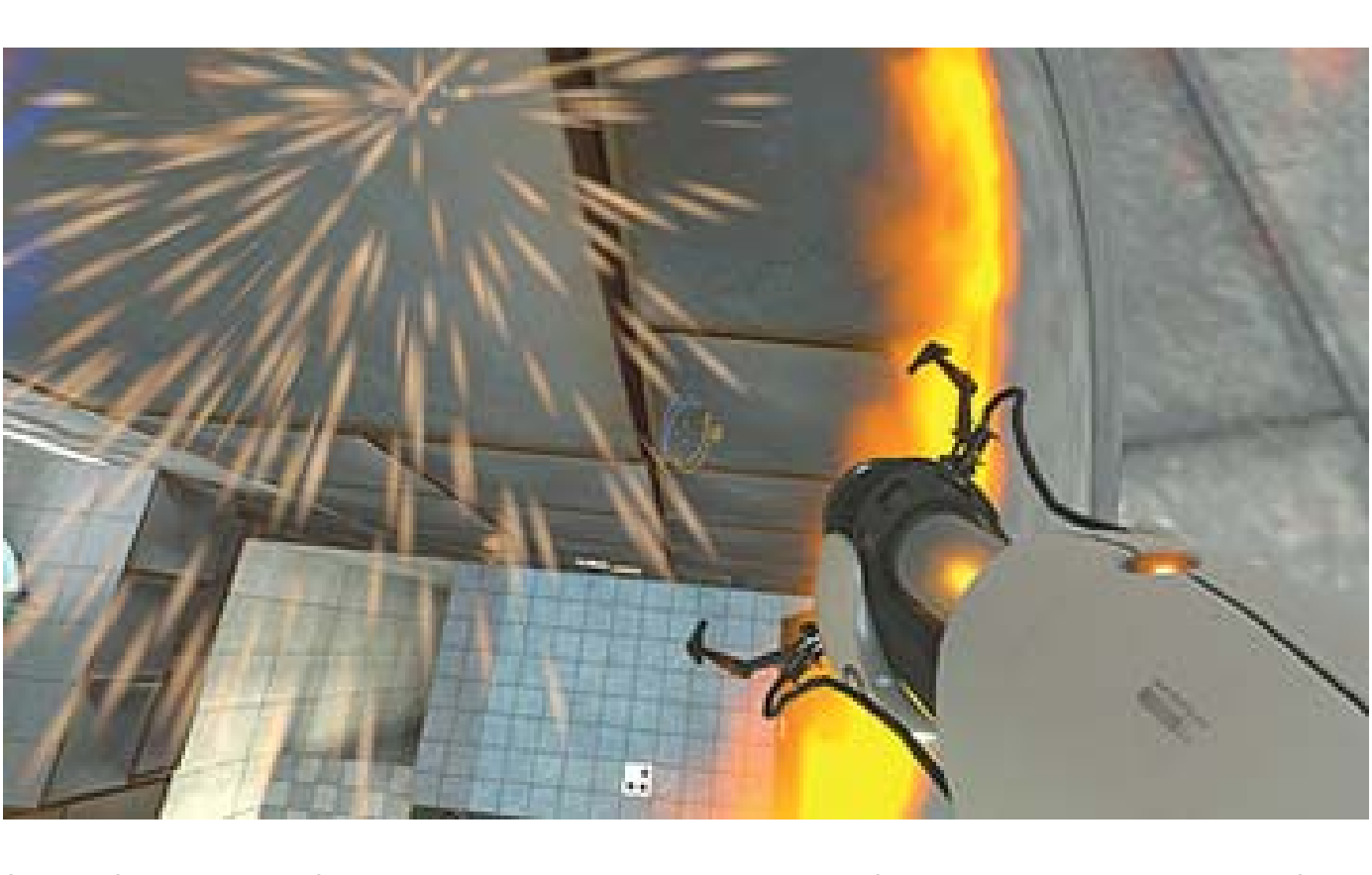
Test Chamber 18 is all about vast spaces. This is immediately evident when you exit the elevator. Time to get started: Place your first portal on the far end of the ceiling ahead of you, and then place your second anywhere that's suitable. Hop through and enjoy the fall.



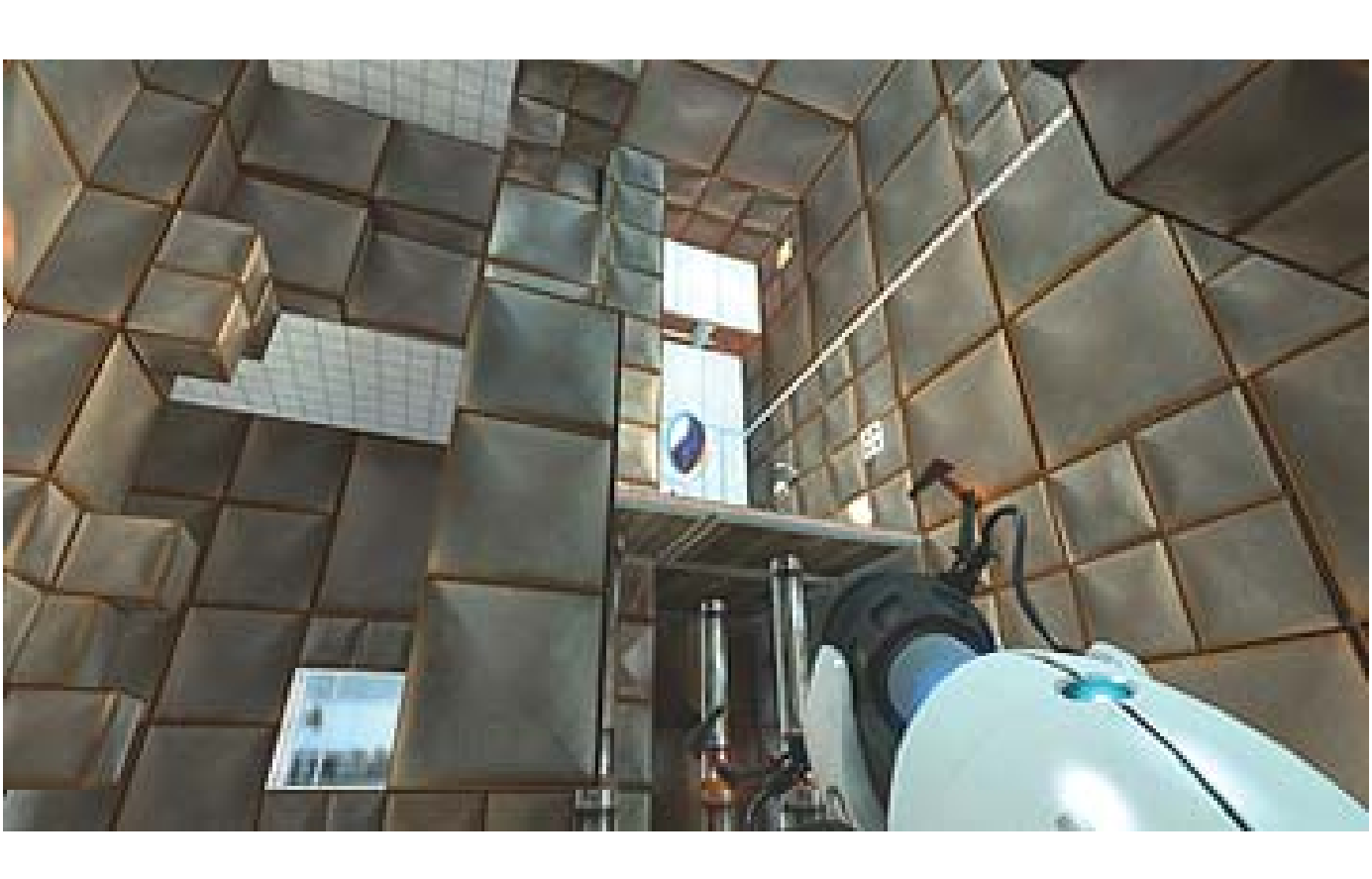


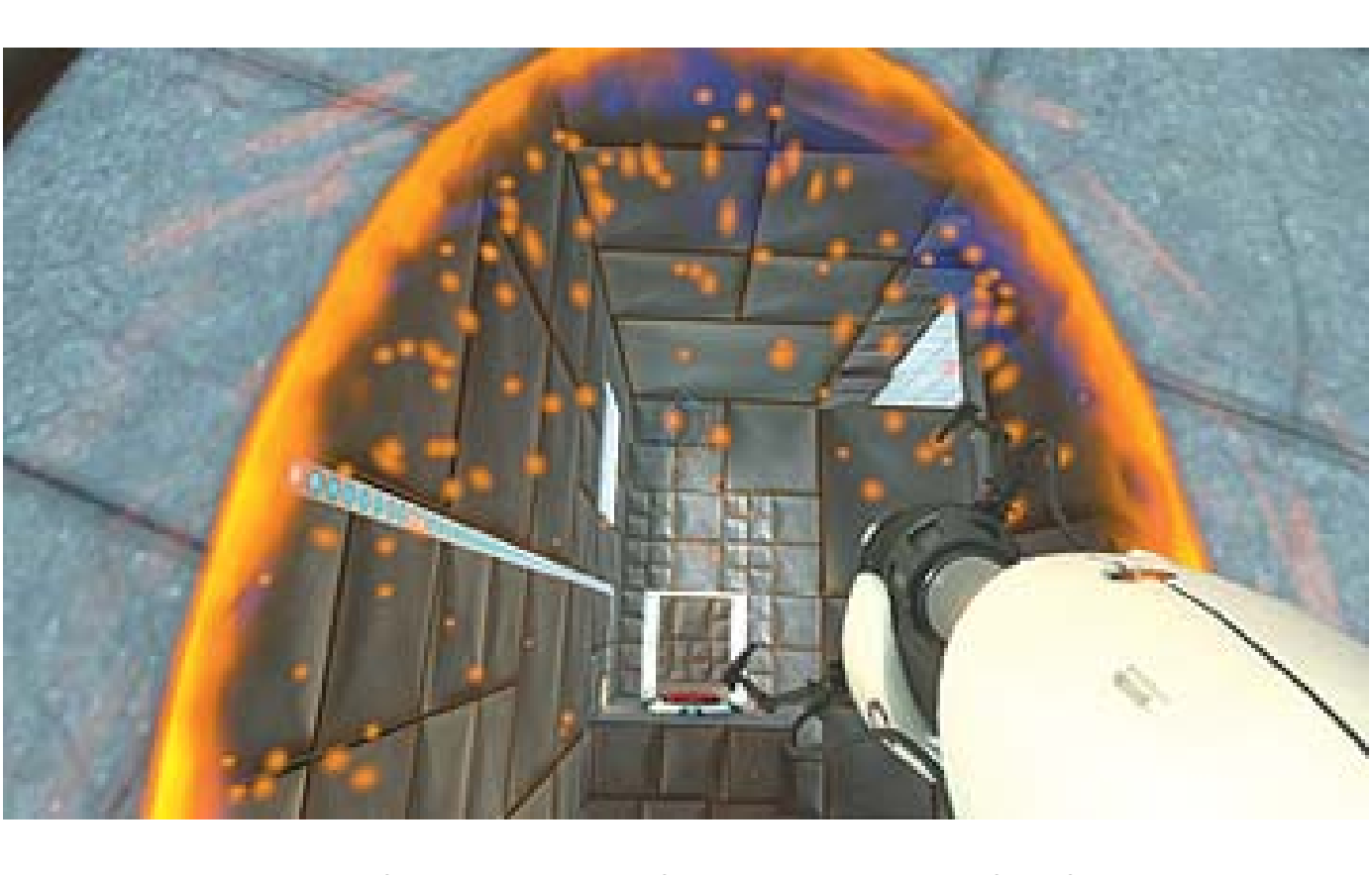
Turn left when you land and fire your first portal on the high ceiling above the ledge before you. The second one goes on the wall of the goo-filled pit. Don't be scared to jump through.



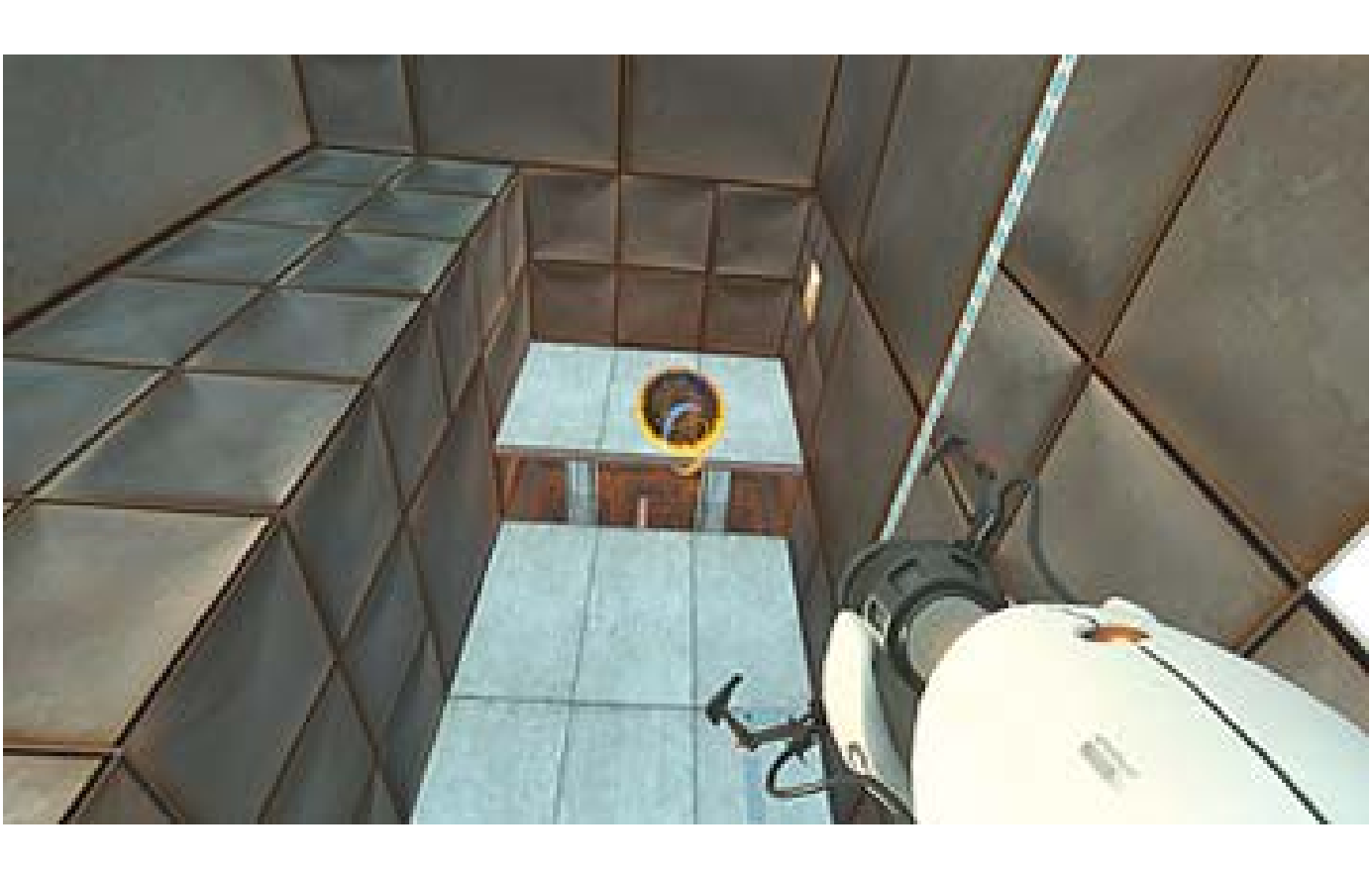


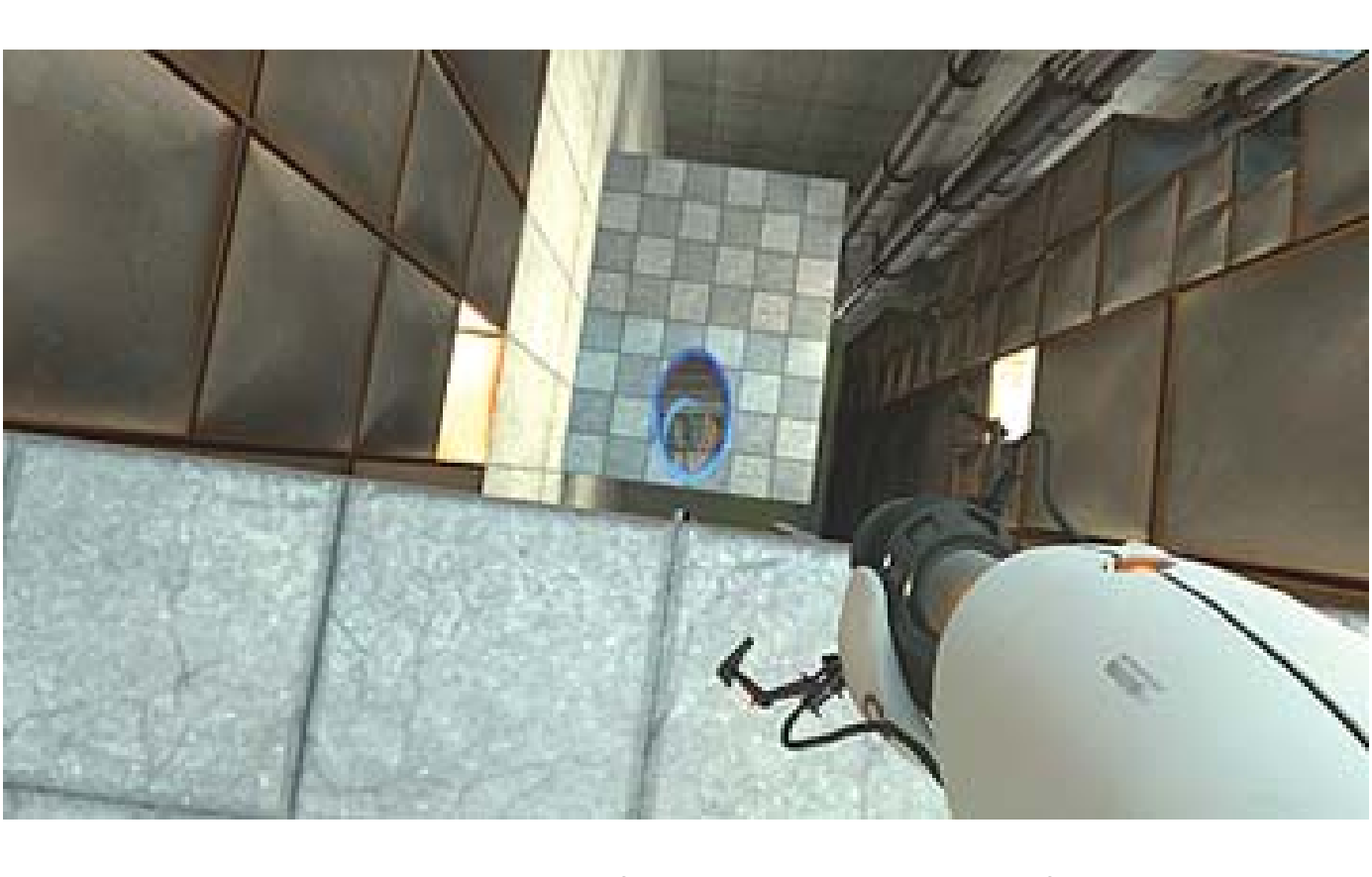
Still more falling: Place your first portal on the tall ceiling above the elevated platform and the second down below your feet.



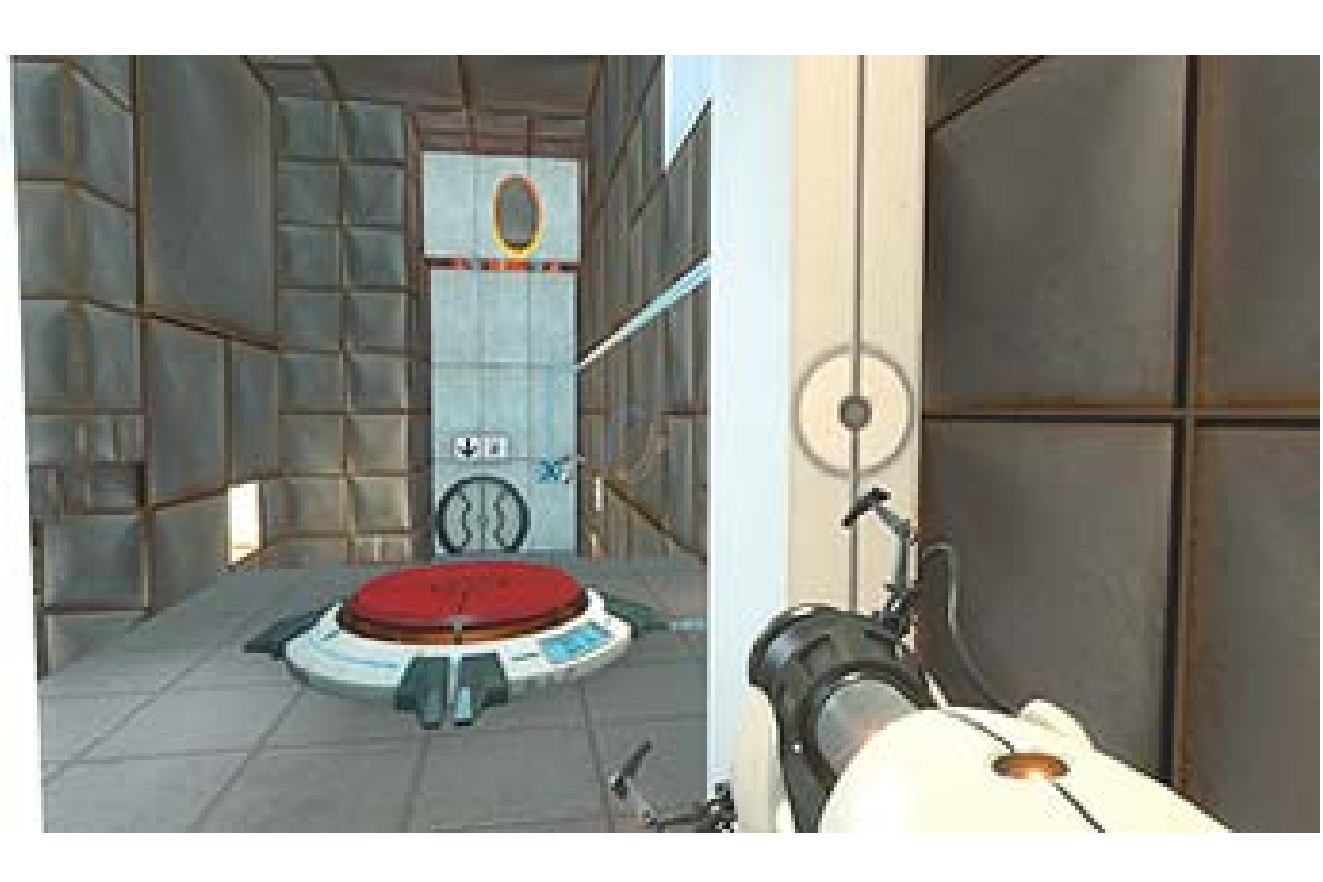


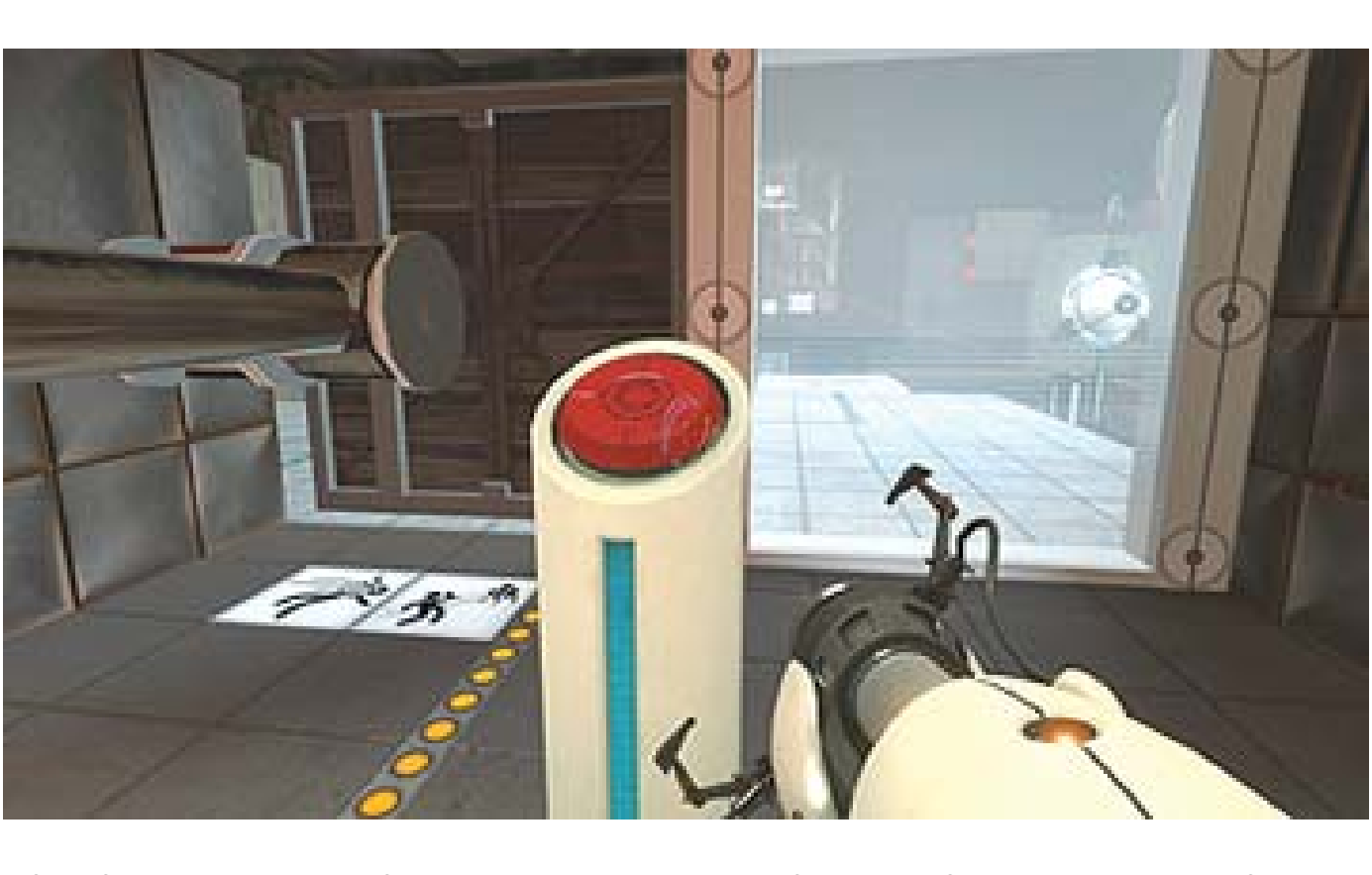
Do it again, but this time, aim your first portal at the stretch of wall below the protruding platform—fire level with the surveillance camera, if you need a guide. Place your second portal at your feet. You're used to this by now, right?



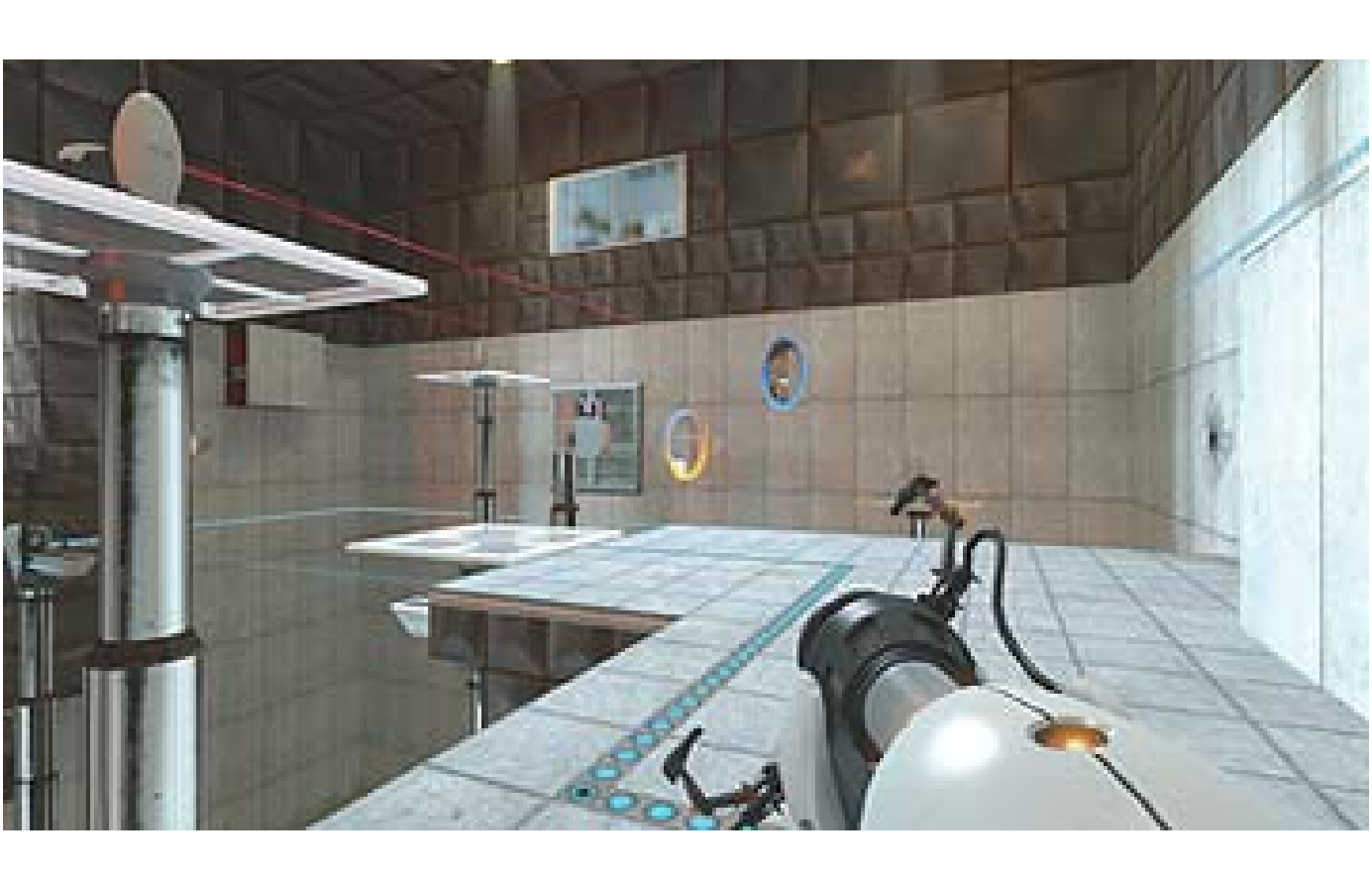


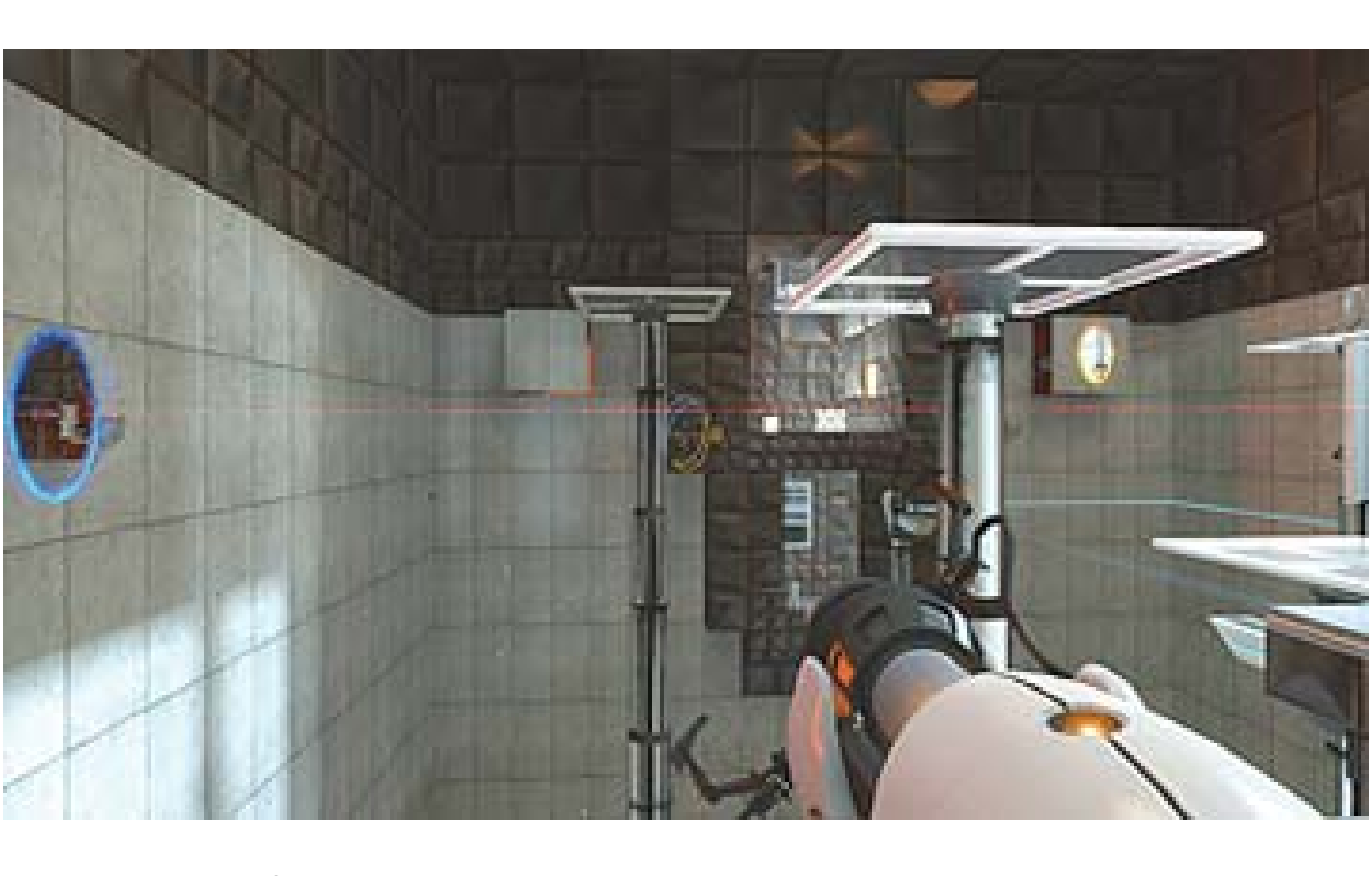
Next, reach the red button you see on the ledge ahead of you. This requires a Fling: Place your first portal on the protruding platform, and the next between it and the button ledge. Hop through and fly. Forget about the button for now, though—you've got some trials to endure before you can get through those blast doors. Hit the switch to power the piston holding the panel behind it and get into the next room.



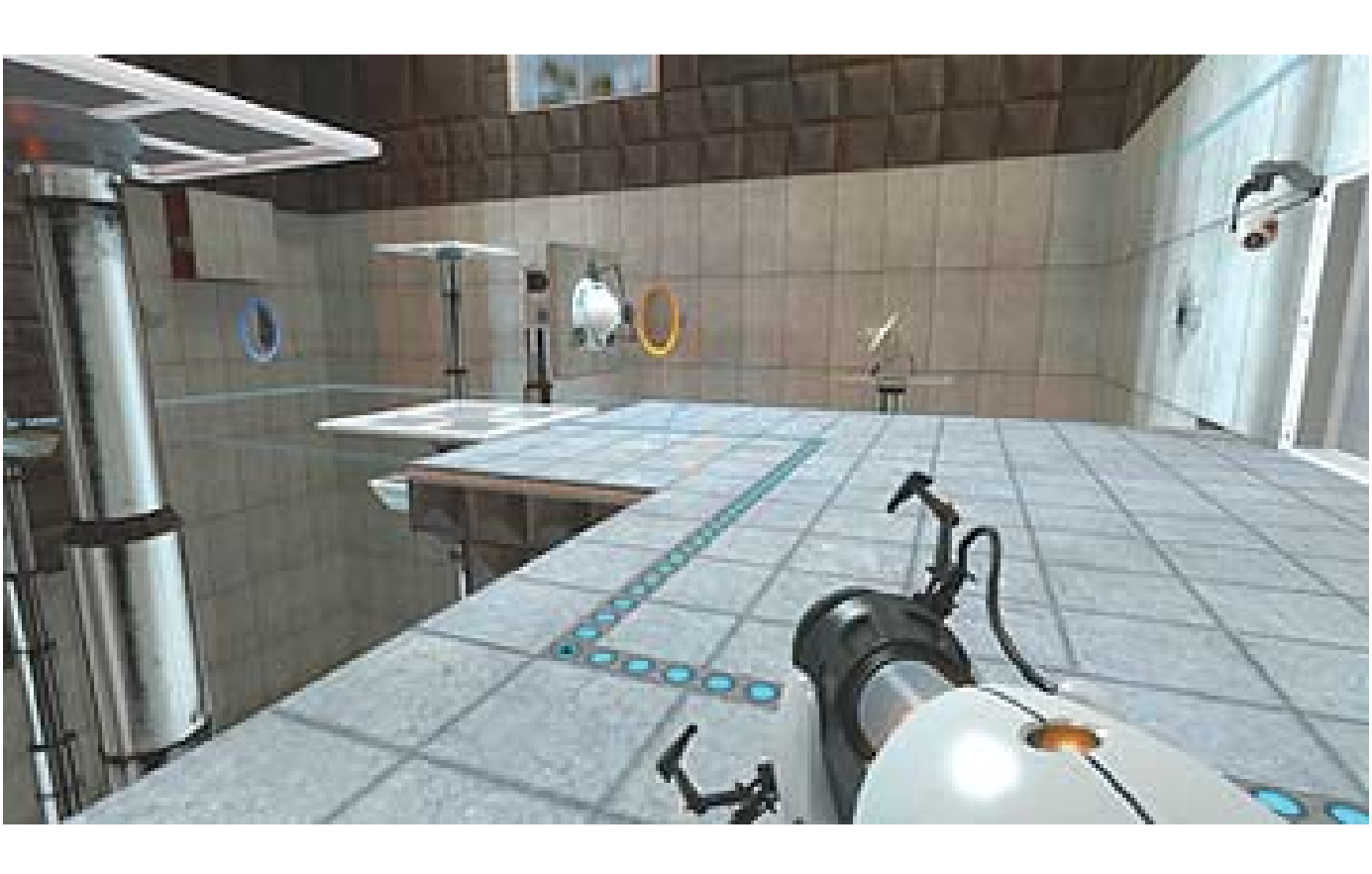


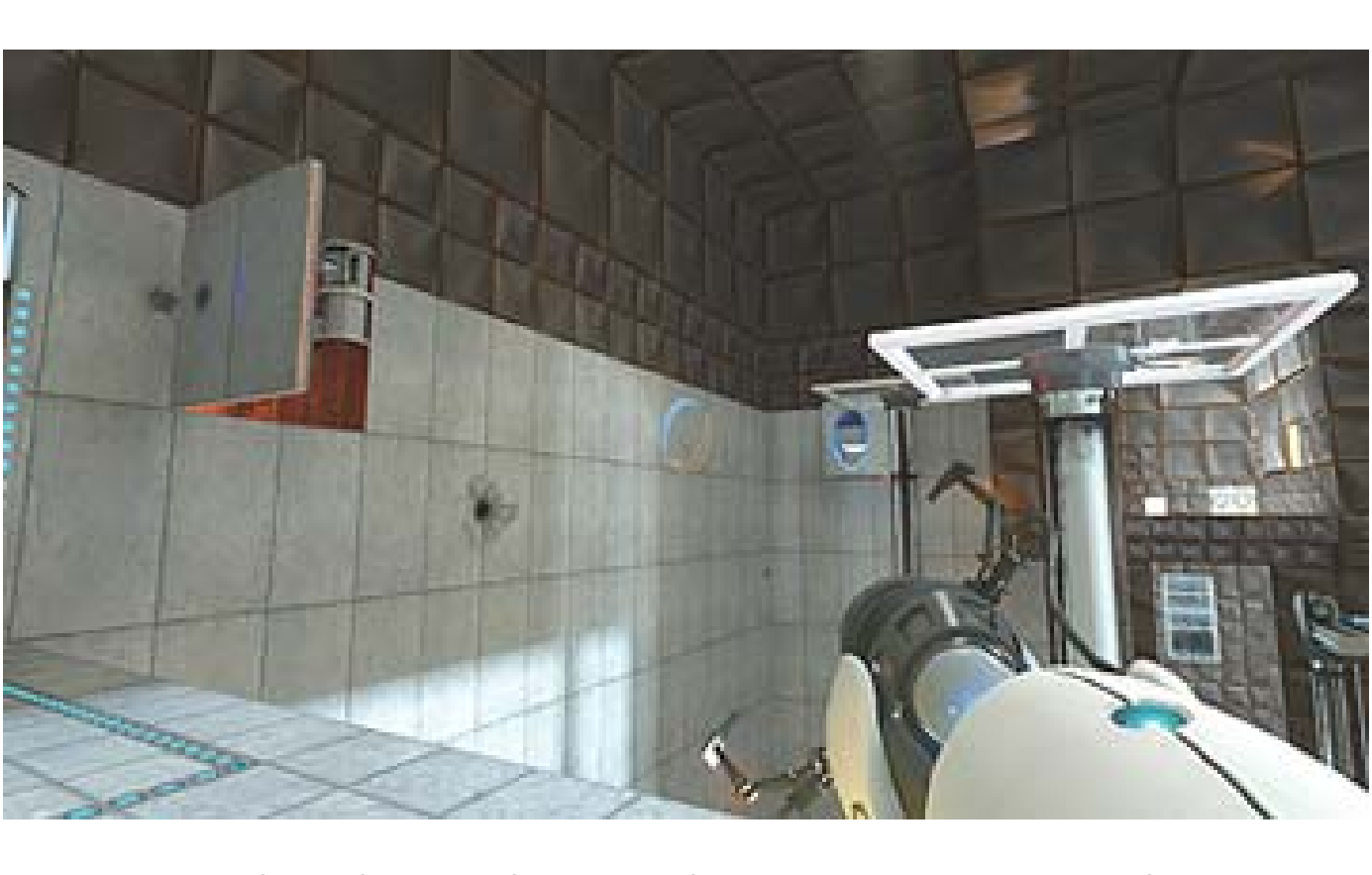
In front of you are a whole bunch of turrets set precariously on a series of elevated platforms. They're only deadly if you come into contact with them, though, and you won't. The rotating Ball Launcher in the room's center is the key to getting rid of the turrets.



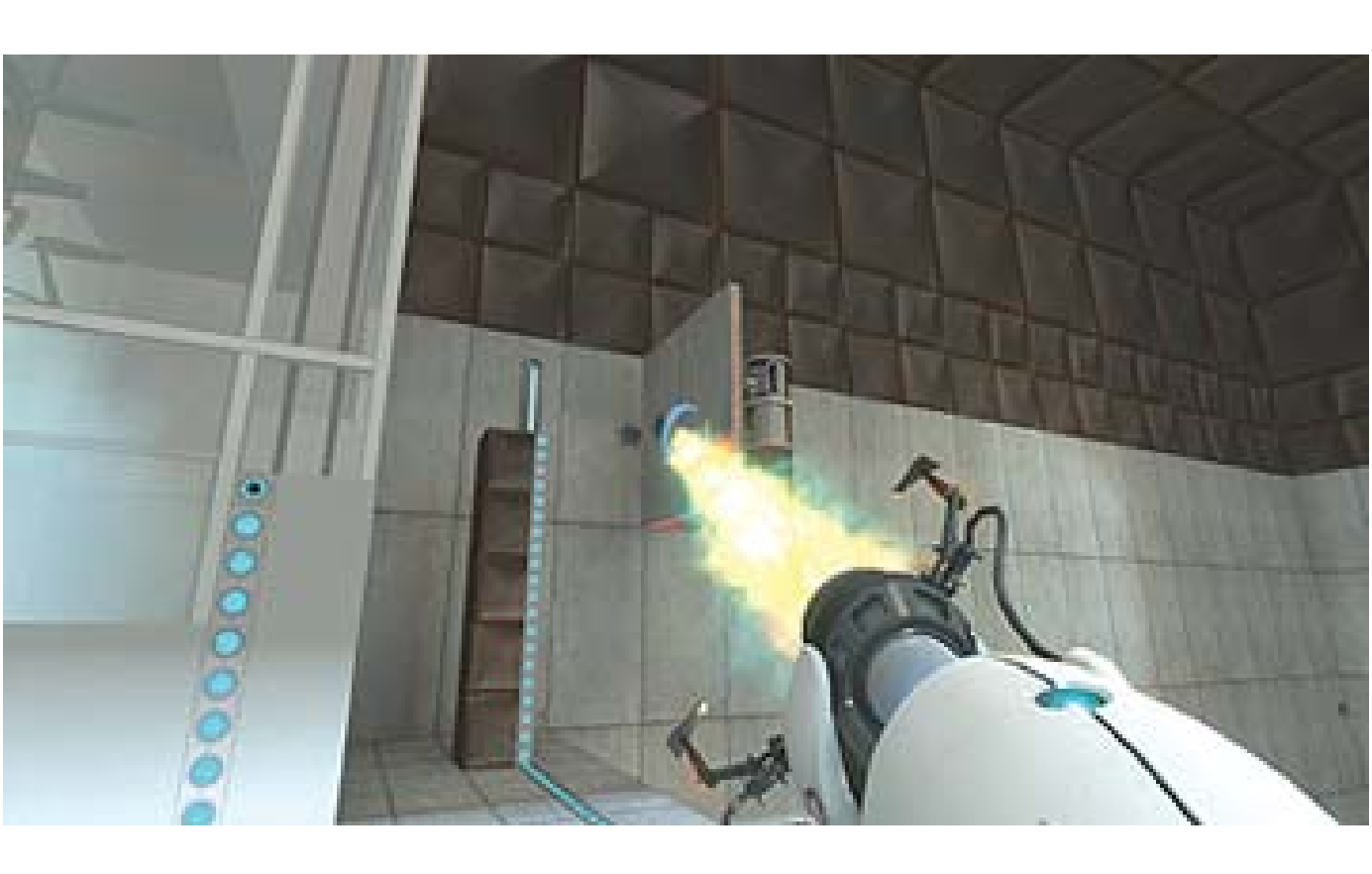


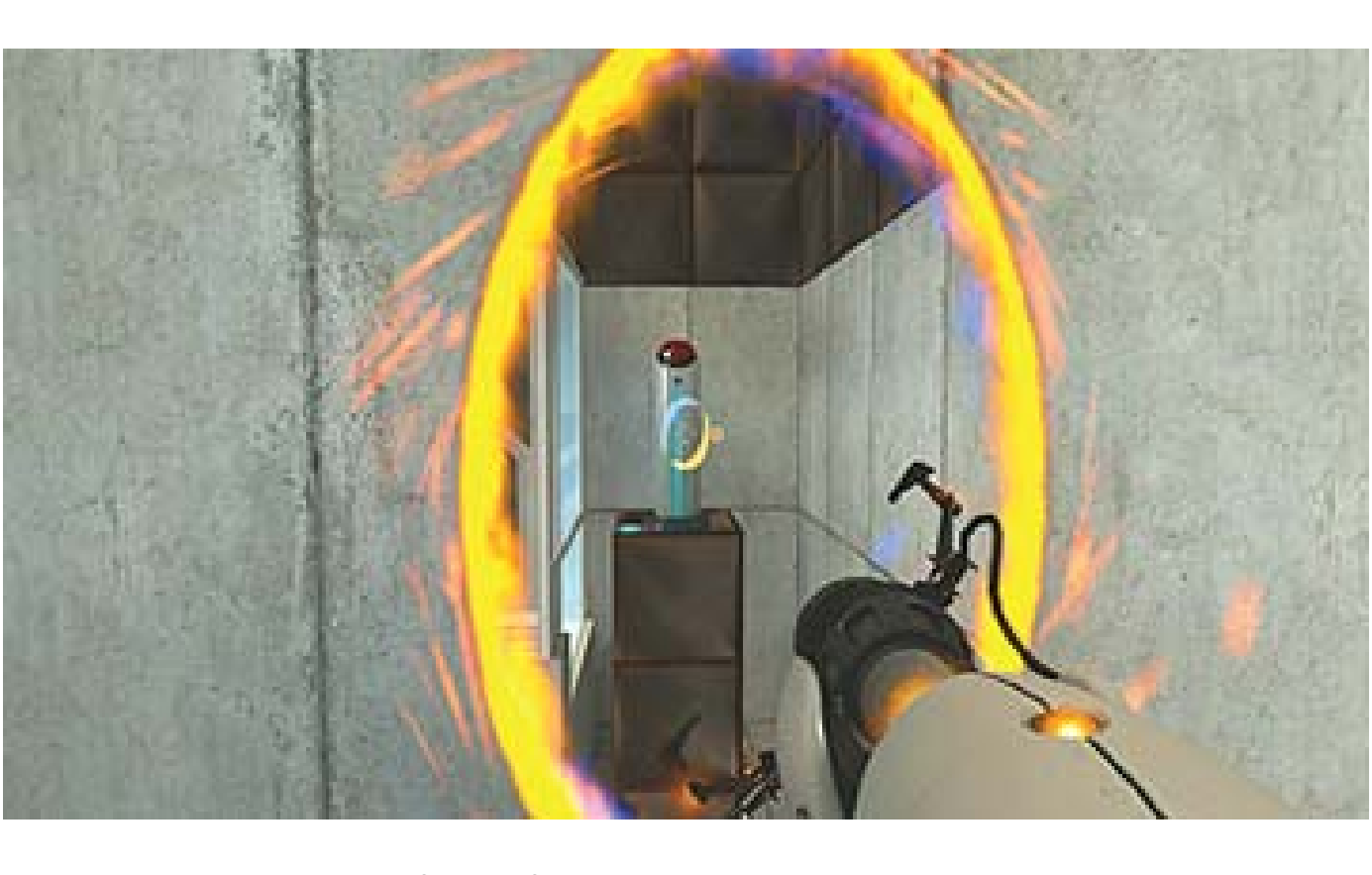
The turrets were thoughtful enough to mark the precise locations where you must place your portals to neutralize them: Just look at where their laser sights hit the walls. Take the turrets out systematically by placing a portal on each of these spots, and another where the energy ball makes contact with the wall—look for the four charred spots.



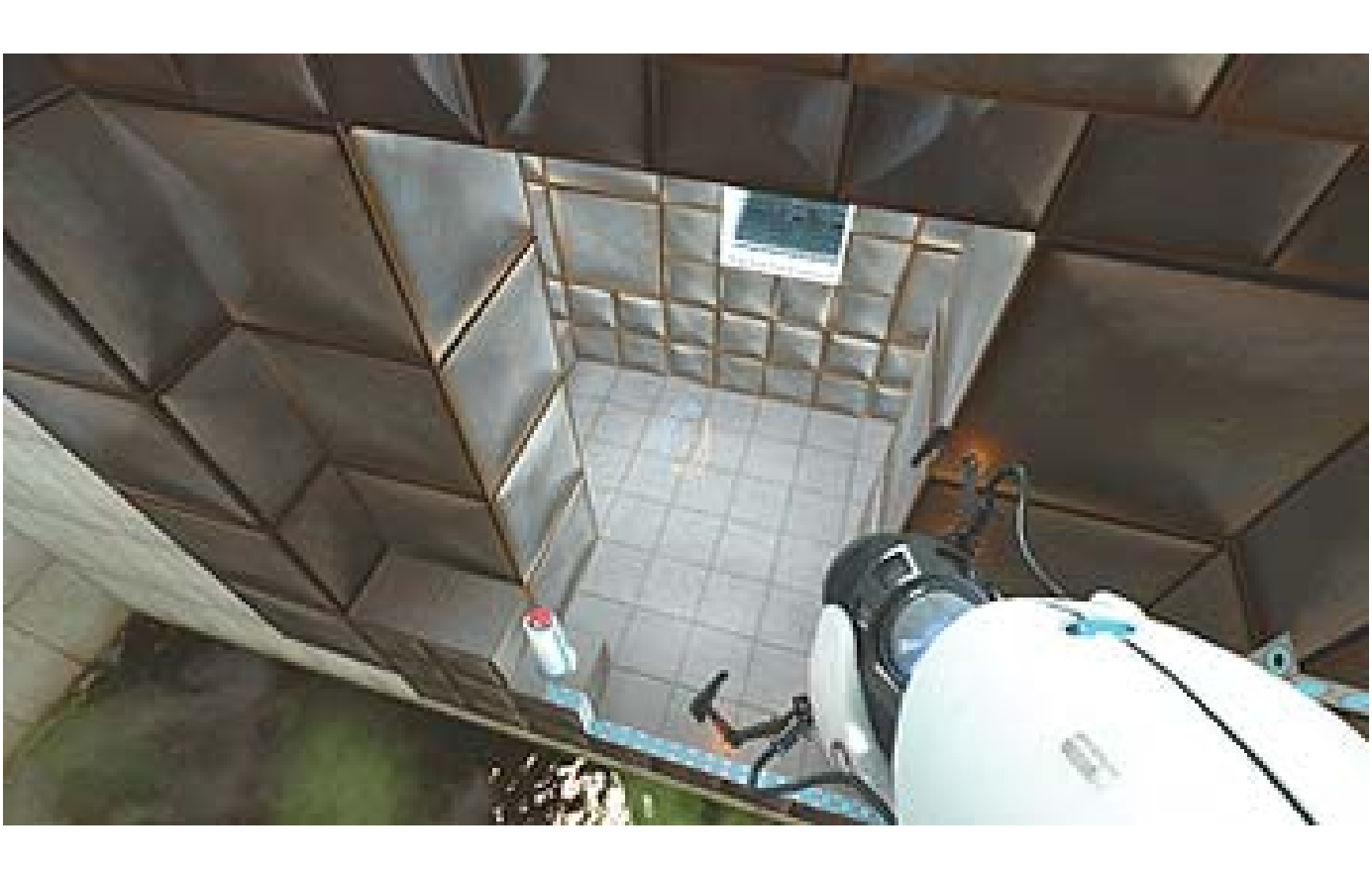


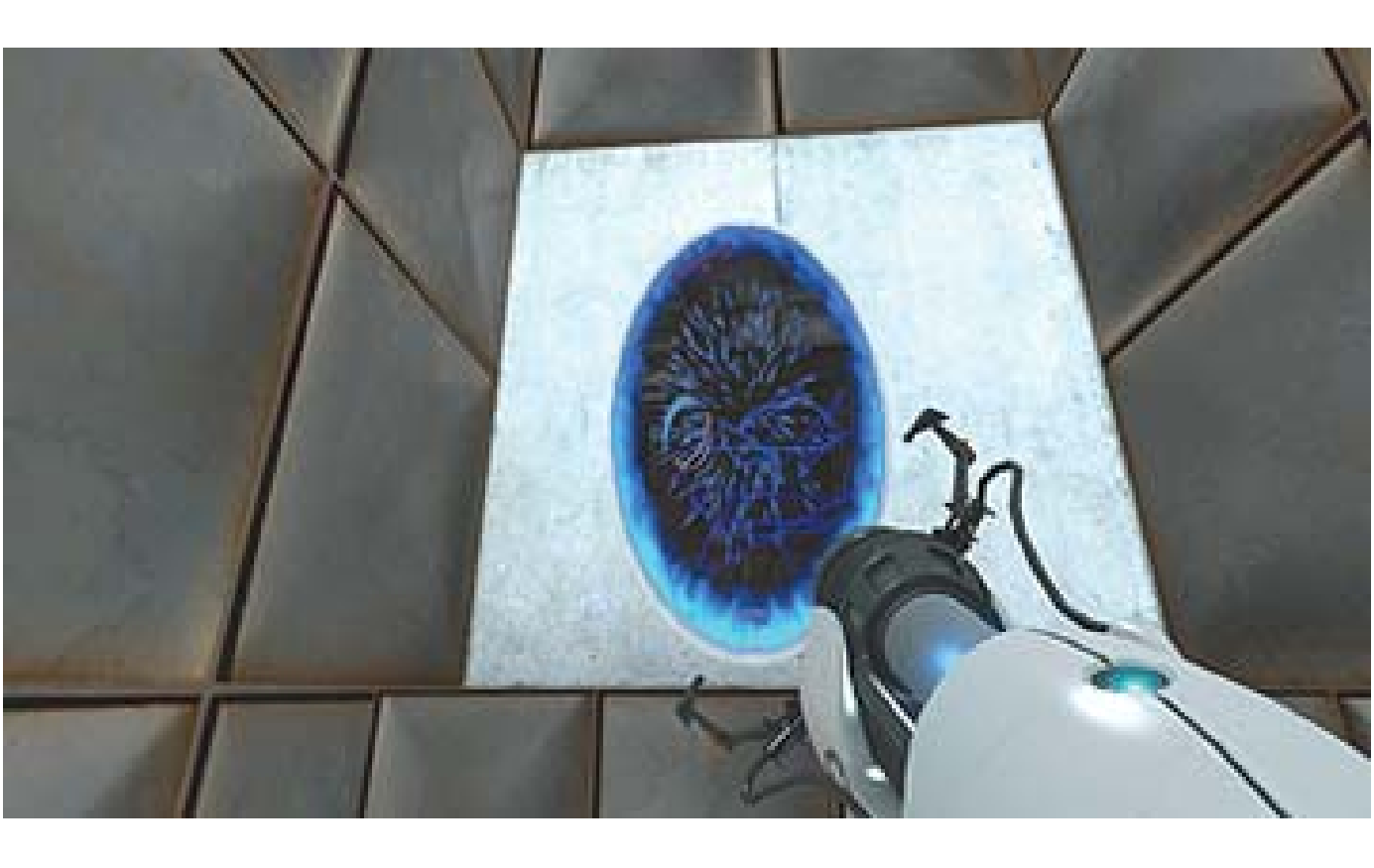
Bask in the tranquility of a turret-free chamber for a moment before turning your attention to the inactive lift. To power it, you're going to feed the Ball Catcher that's shut in by a panel on the wall behind you and to your left. First, place portal number one on the protruding panel at the far end of the room, directly opposite the Catcher. Place your second portal on the energy ball's next destination.

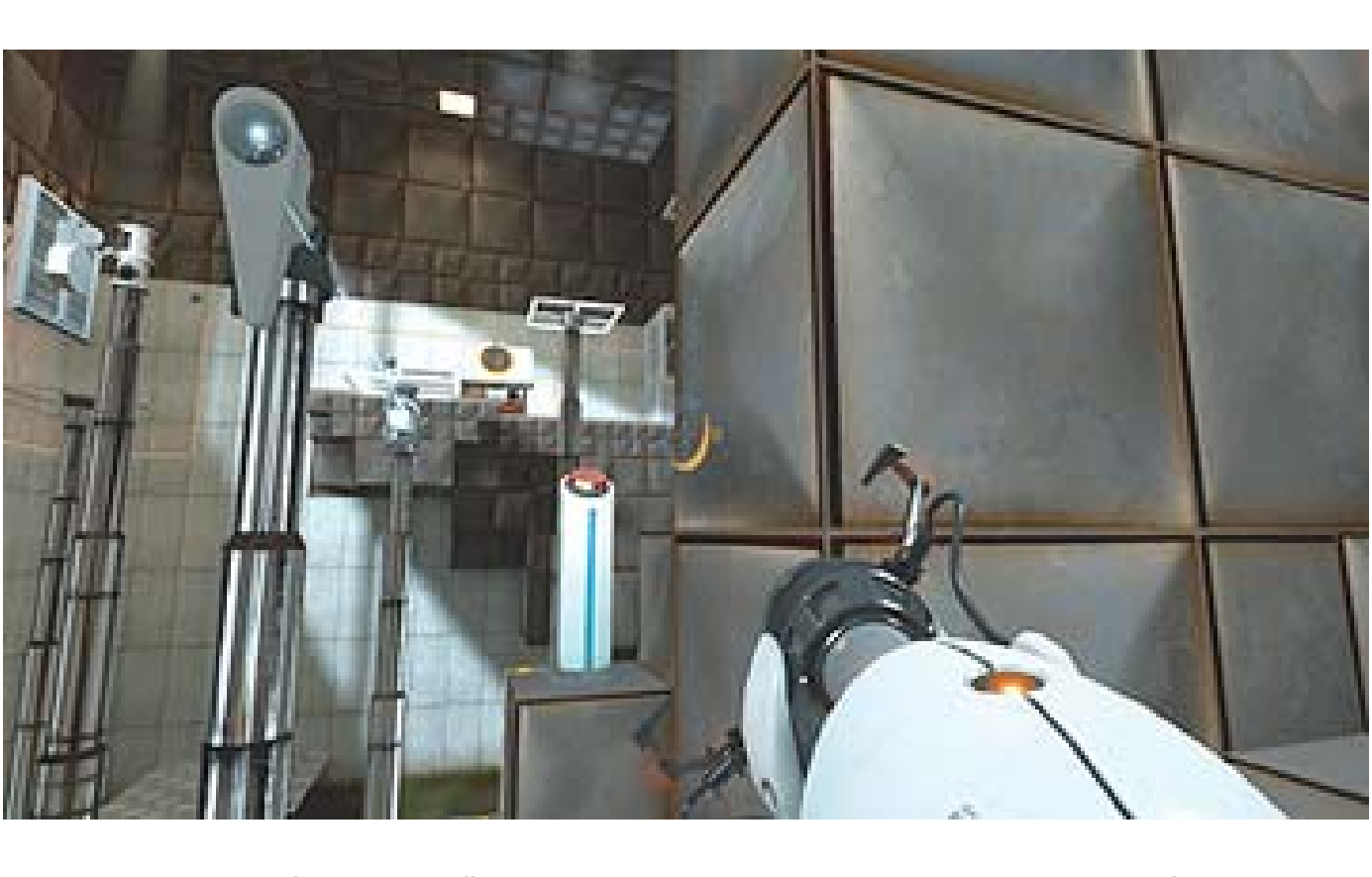




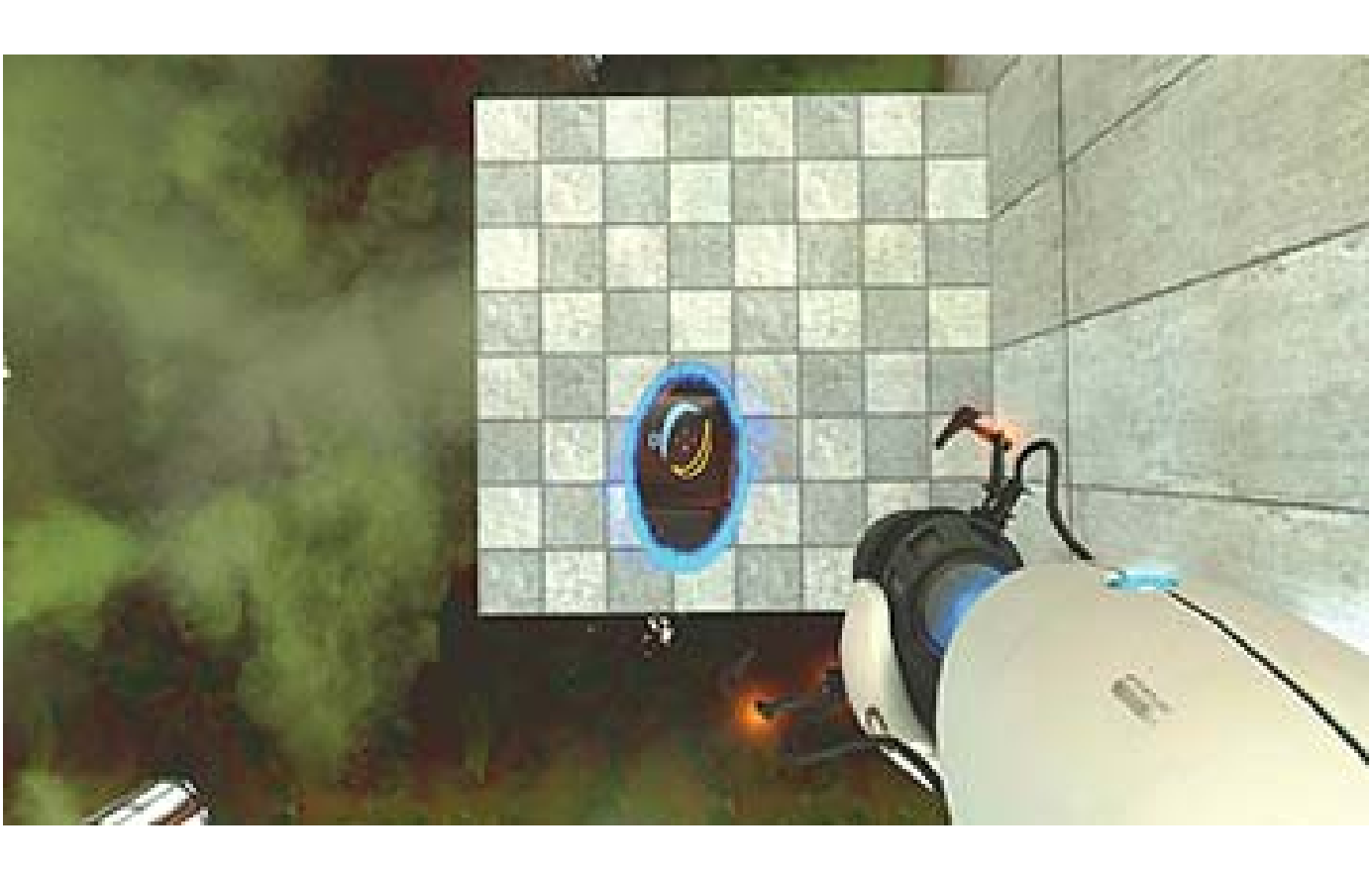
The moment the energy ball emerges from your first portal, replace it on the closer protruding panel—the one with the switch pinnacle in between it and the Catcher. Immediately place your second portal on the wall between the switch's pinnacle and the Catcher's housing. You should now see the switch through your second portal; run through and flick it. You have just activated the horizontal lift that runs through the chamber's center. Hop on it.

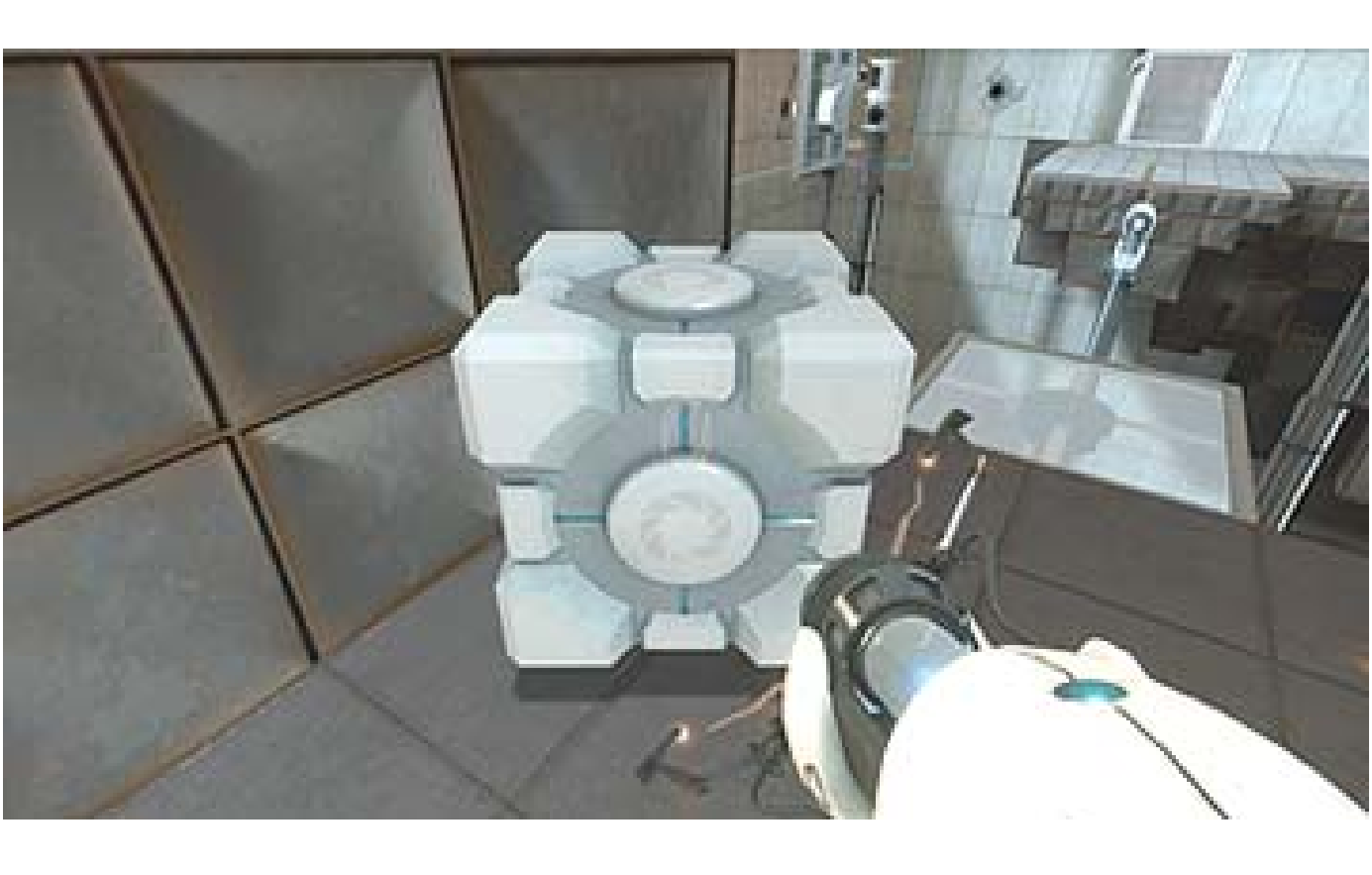




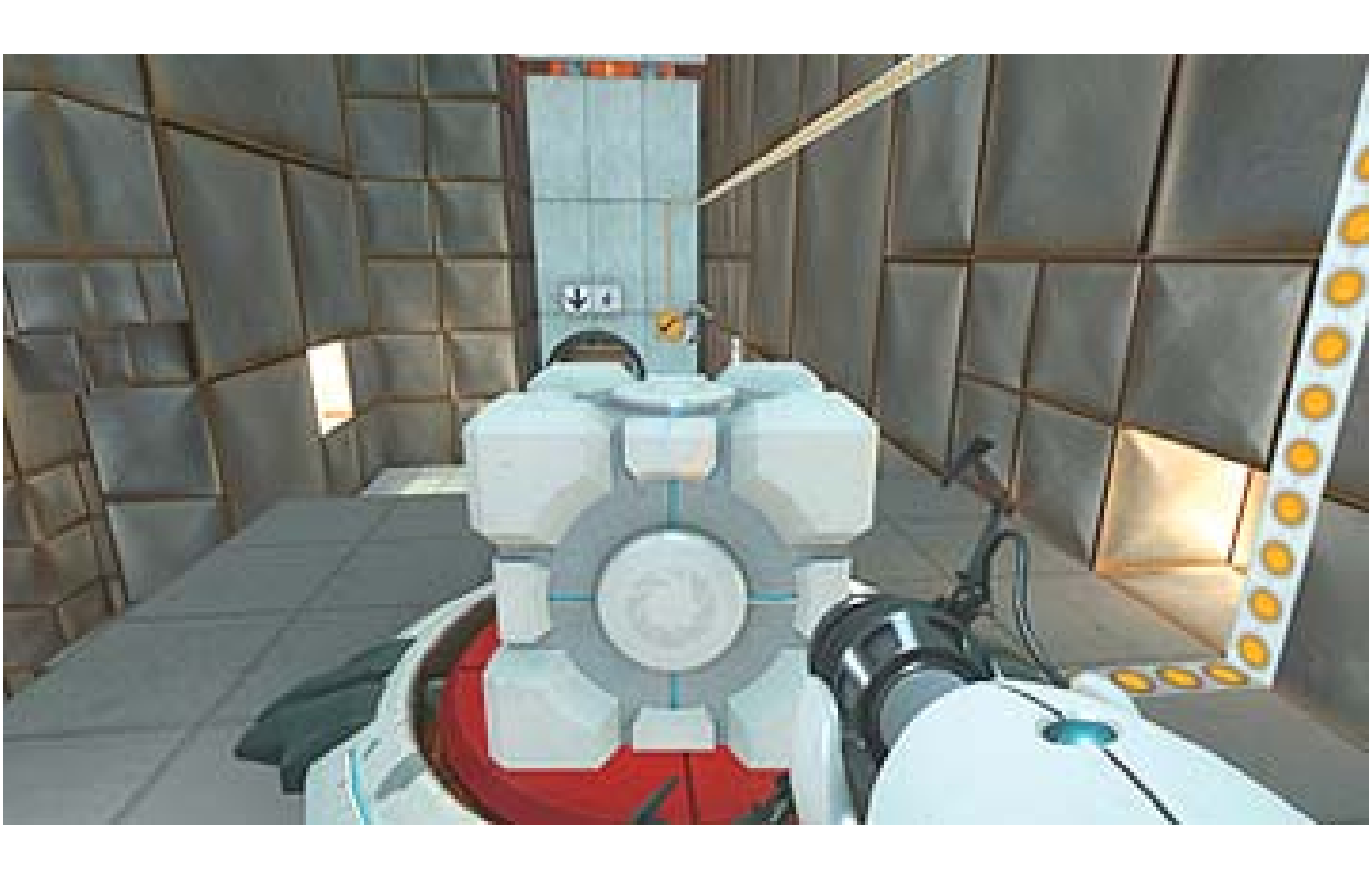


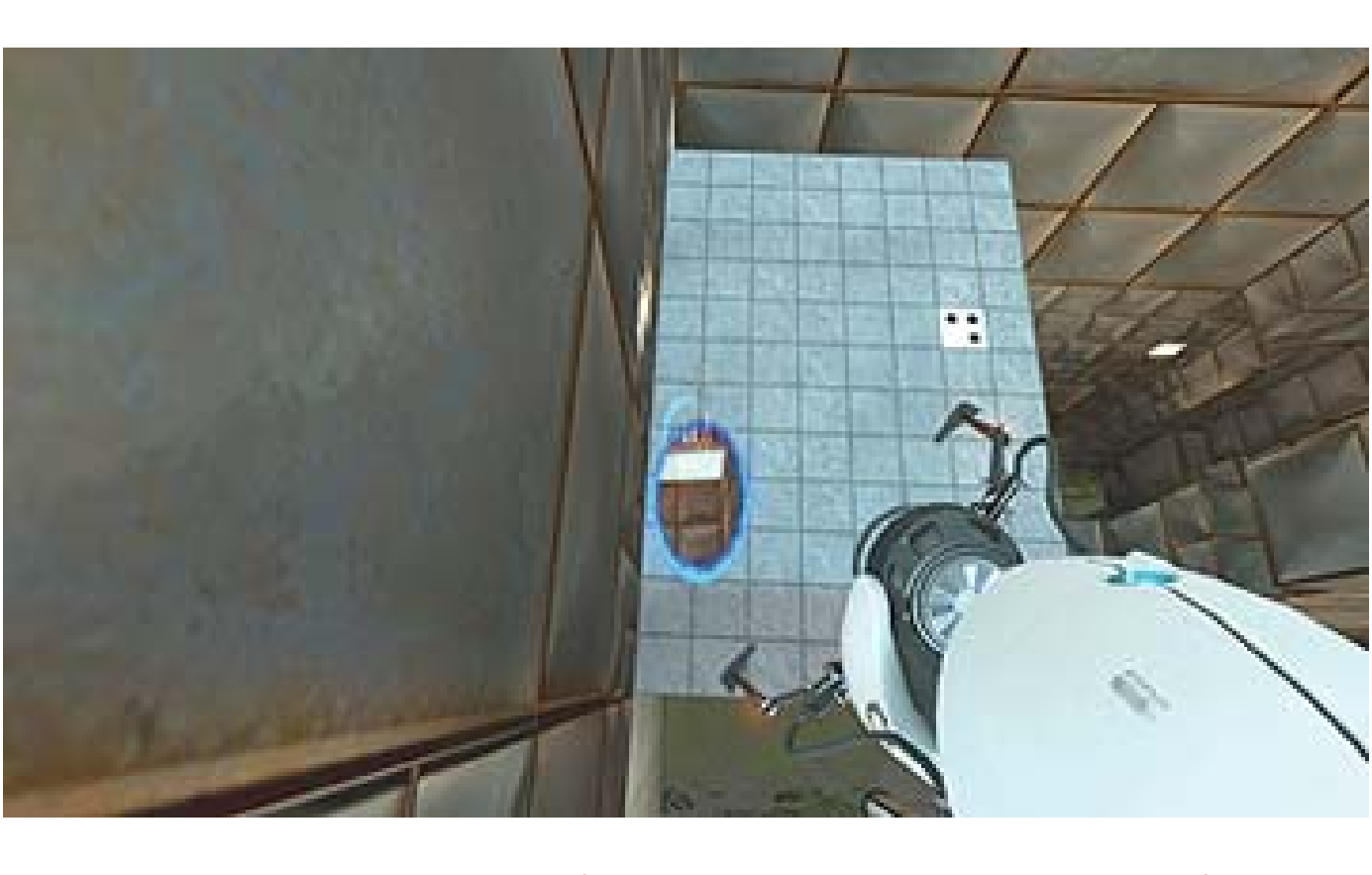
When it reaches the end of its line, jump off into the lower room. You've got some portal placement to do before you hit the switch at the room's threshold, though. Place your first portal on the left inside wall of the room. Now hit the switch and place your second portal on the protruding panel that's just been activated at the chamber's far end. Hop through your first portal and get ready for some quick movement.



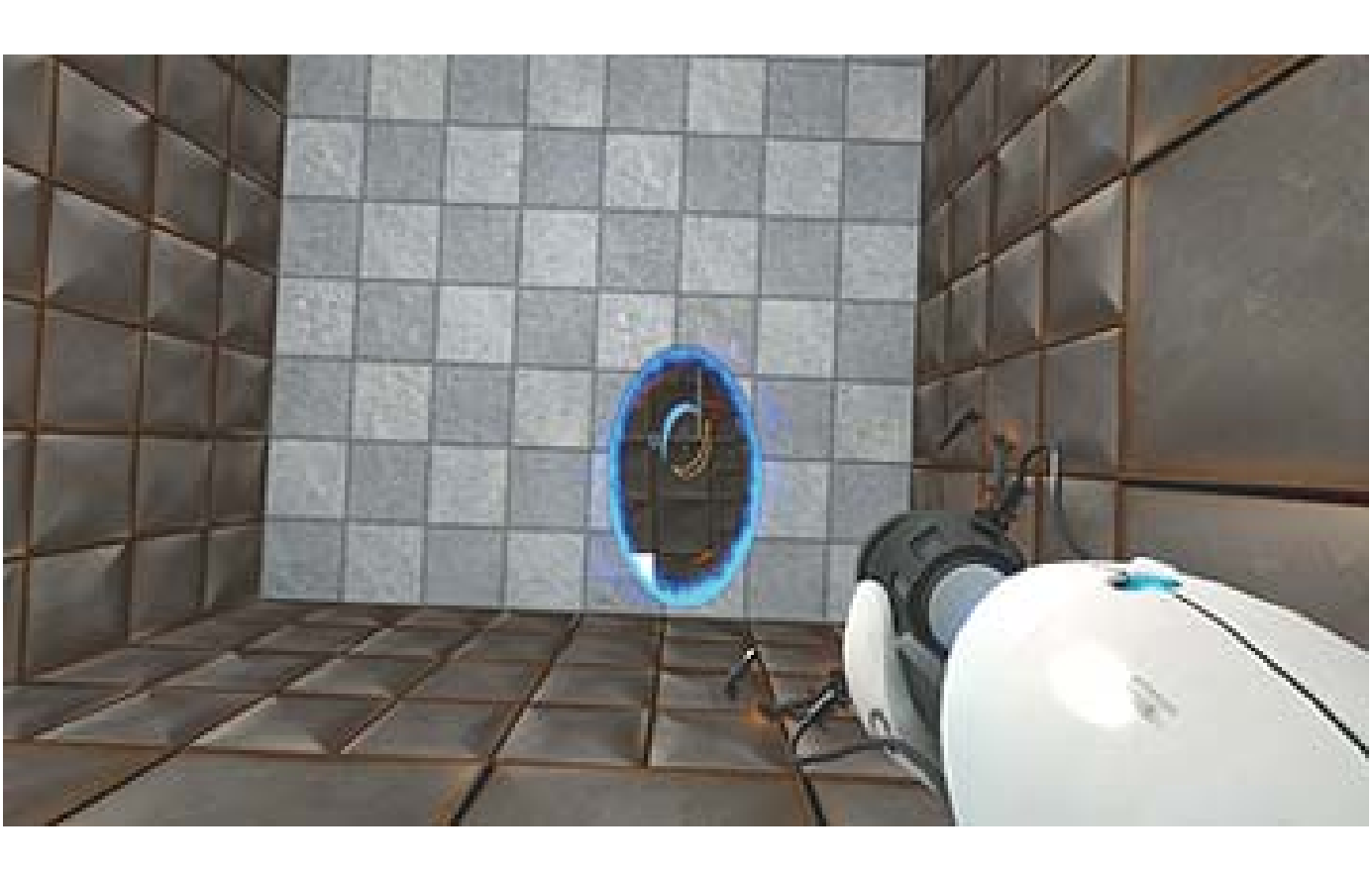


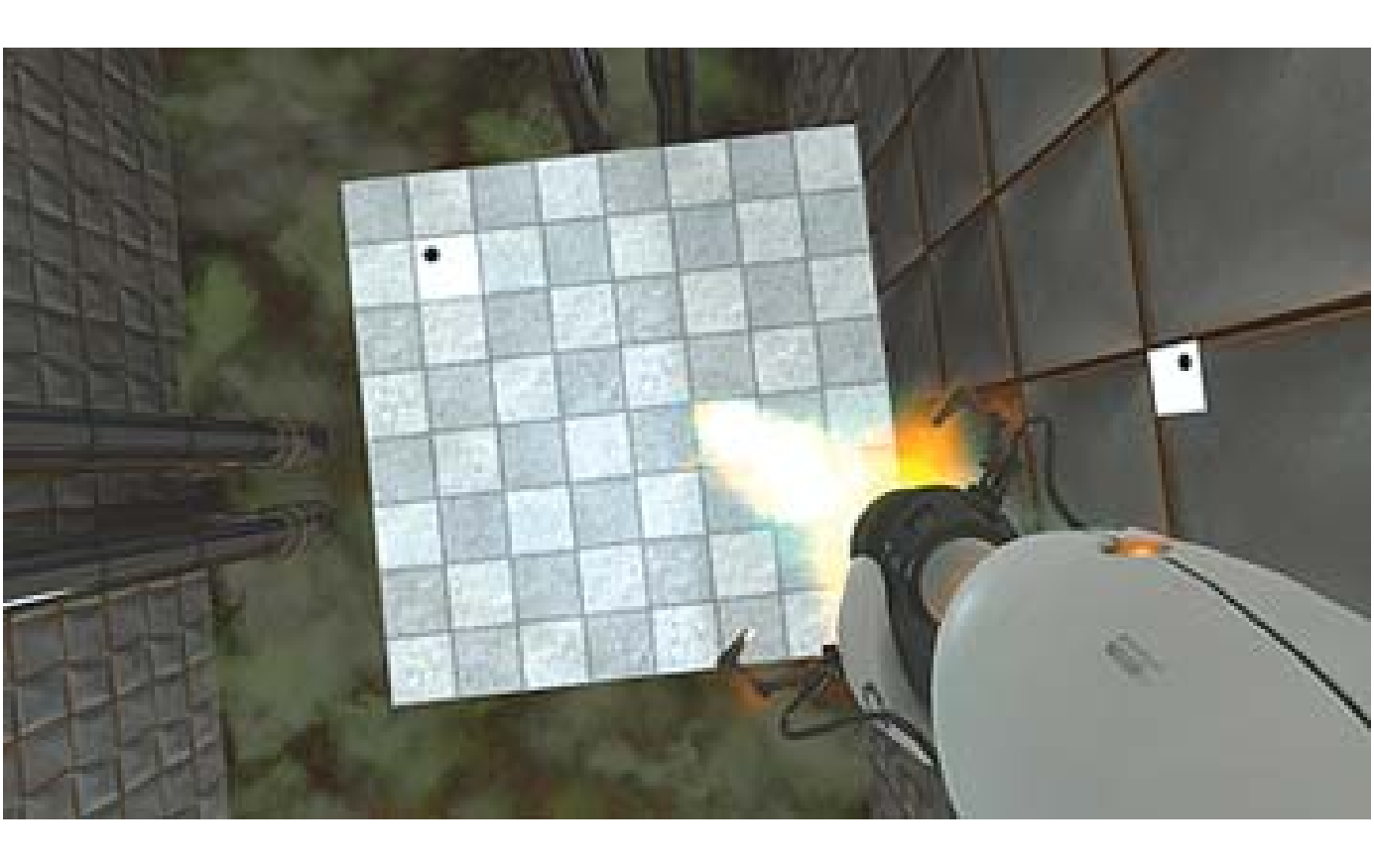
When you emerge through the portal on the inclined panel, immediately bolt to your right and look down: Floating above the goo is a small square of portal-friendly real estate. Replace your first portal here and jump through. You are now flying high to your destination: The room above the one you were in a moment ago. Pick up the Weighted Storage Cube and hop on the lift. Get back to where you entered the chamber and leave the Cube somewhere safe.

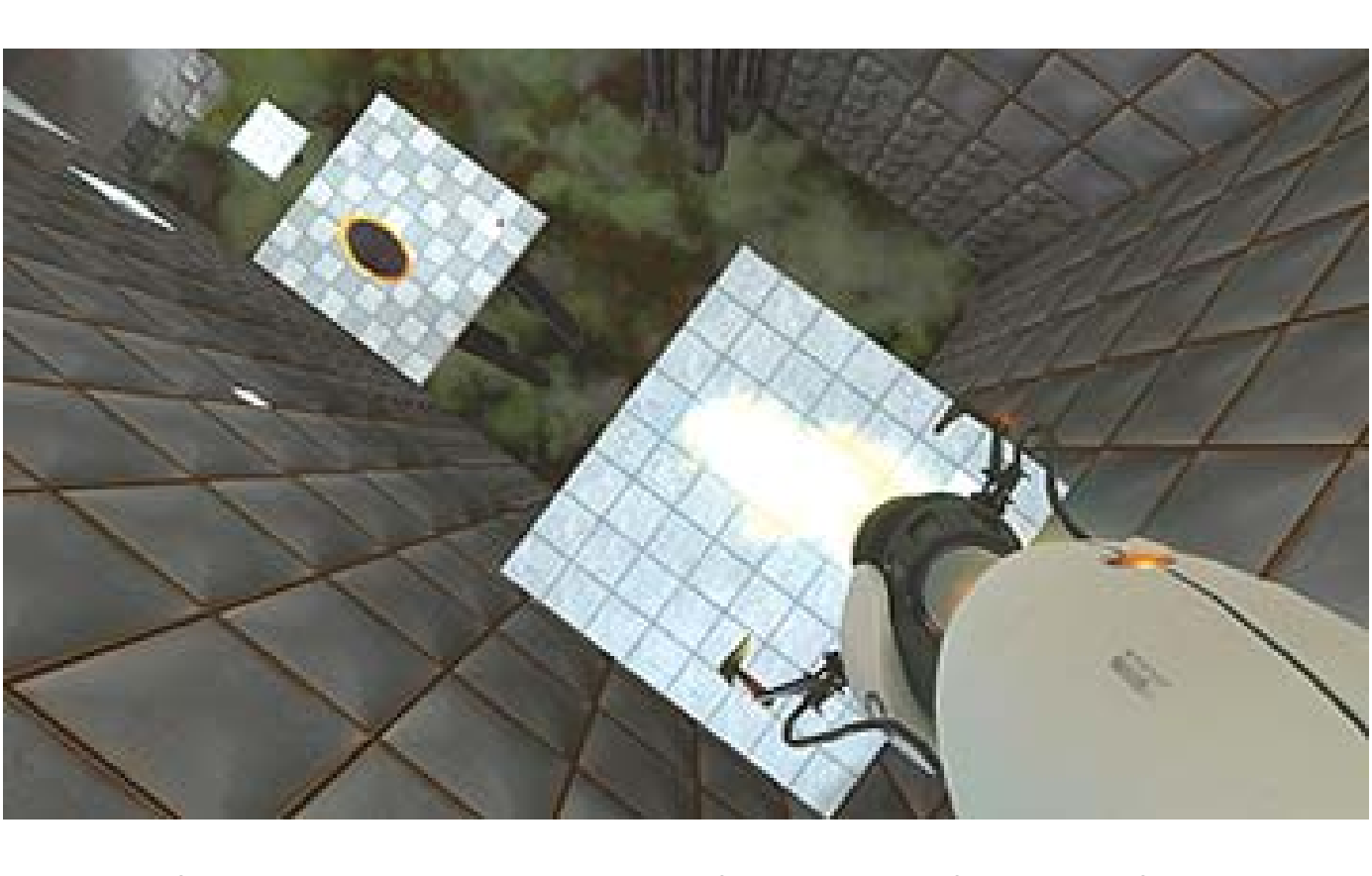




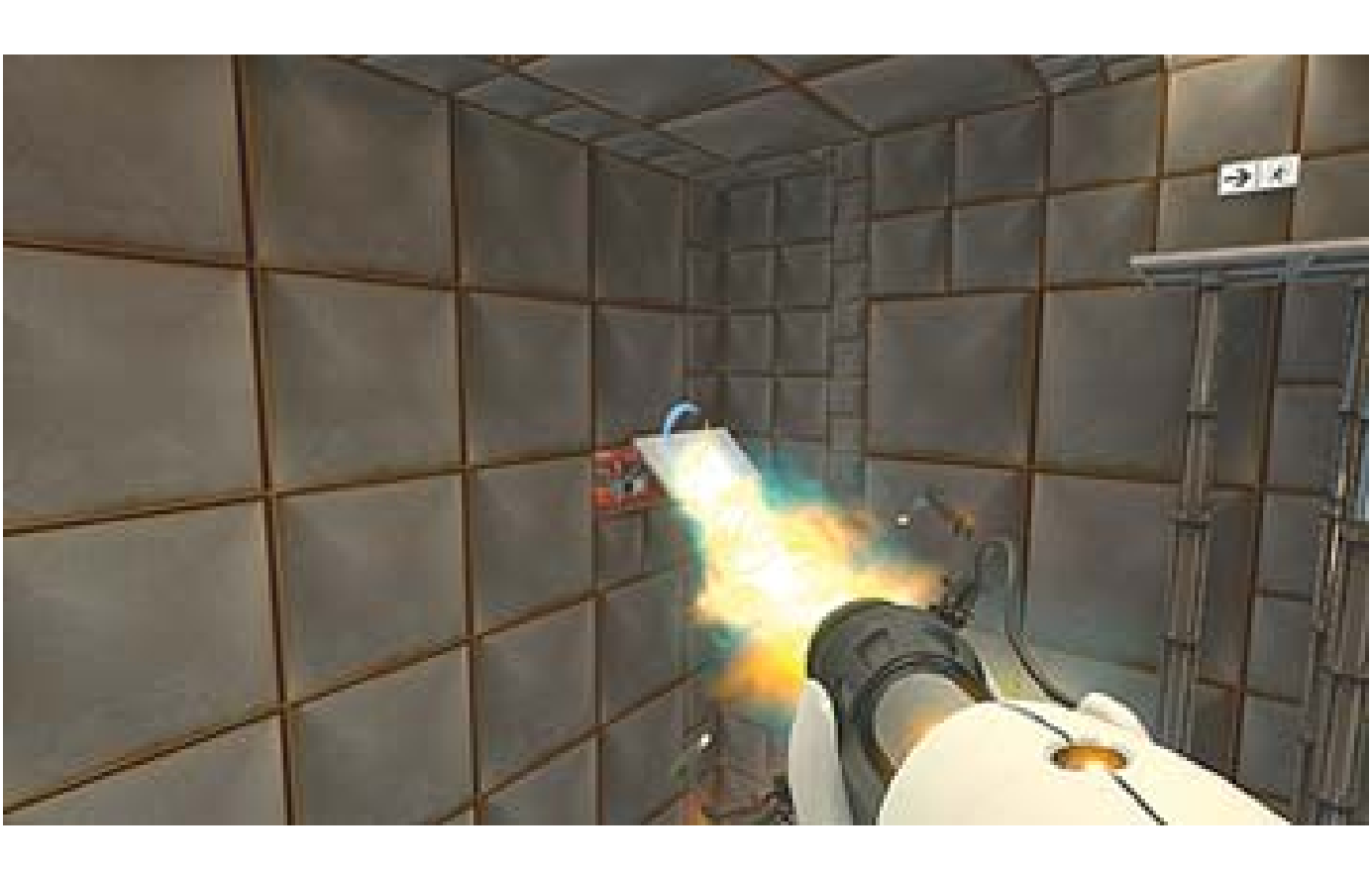
You're done with this chamber now, so just take the lift back to the room below the one where you just got the Cube, hit the switch, and portal back to the entrance. The panel that the switch activates is the very same one that lets you out. When you're out, place the Cube on the red button, fire a portal on the ground before the blast doors and another on the platform below you, and hop through. Now proceed through the blast doors.

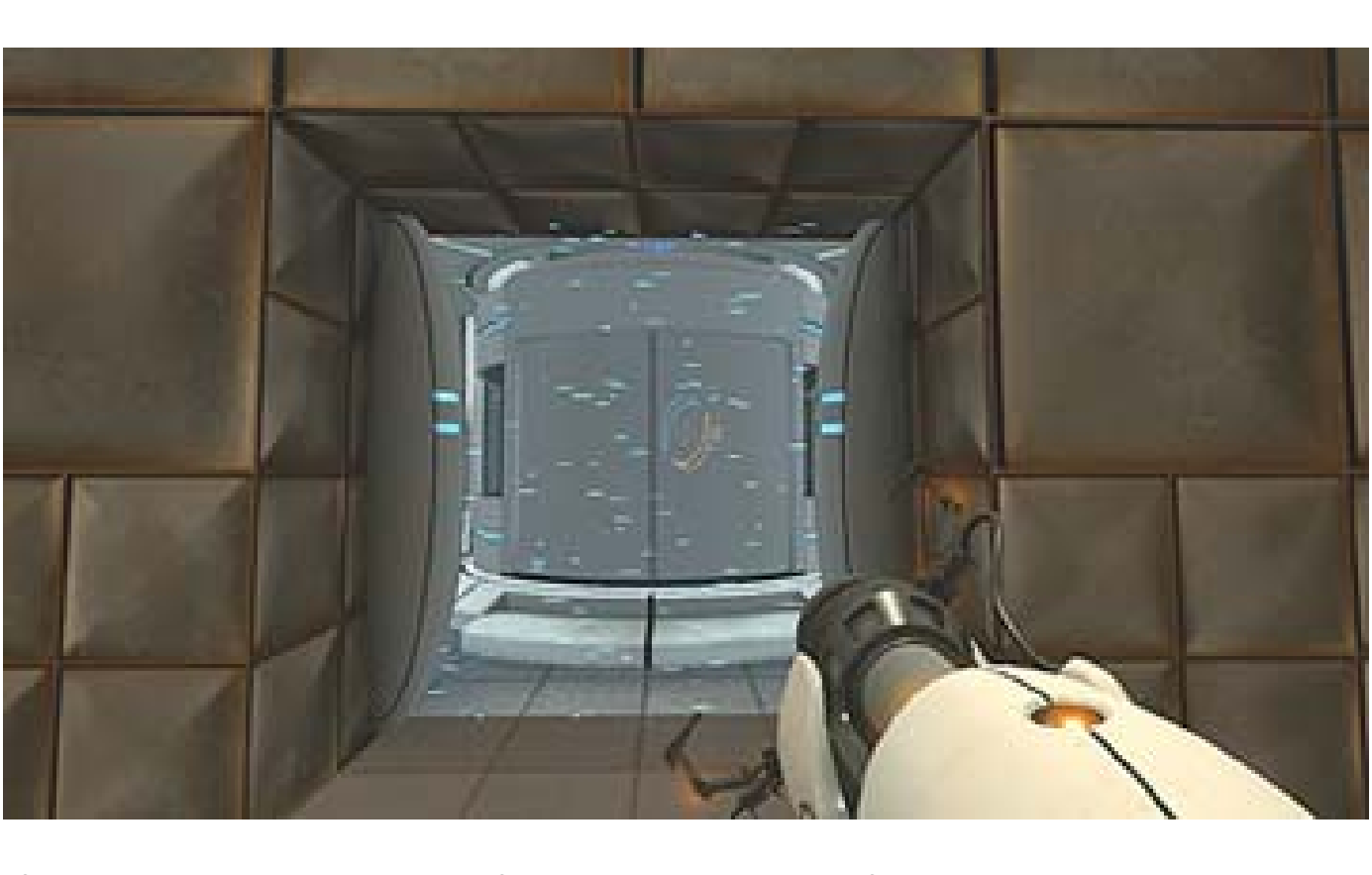






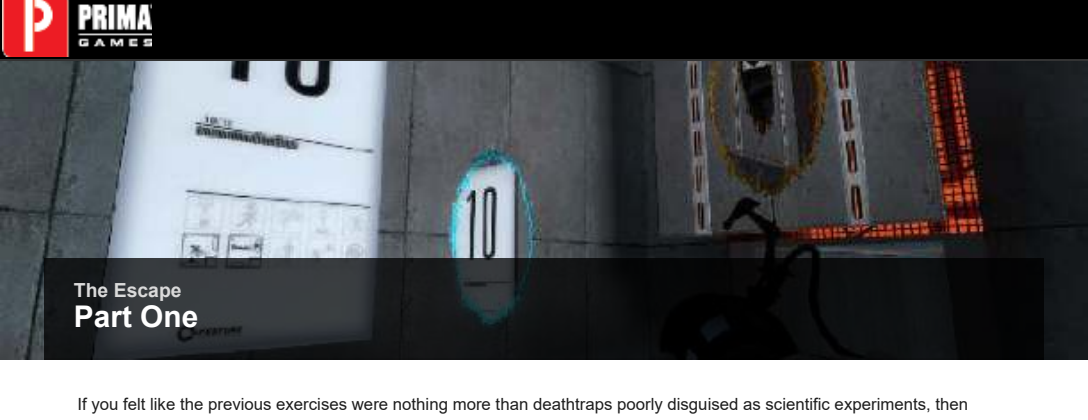
As you emerge from your second portal, you should be in range of the next-highest platform. Place your first portal on the next platform, and your second where you'd land if you weren't going to continue bouncing.





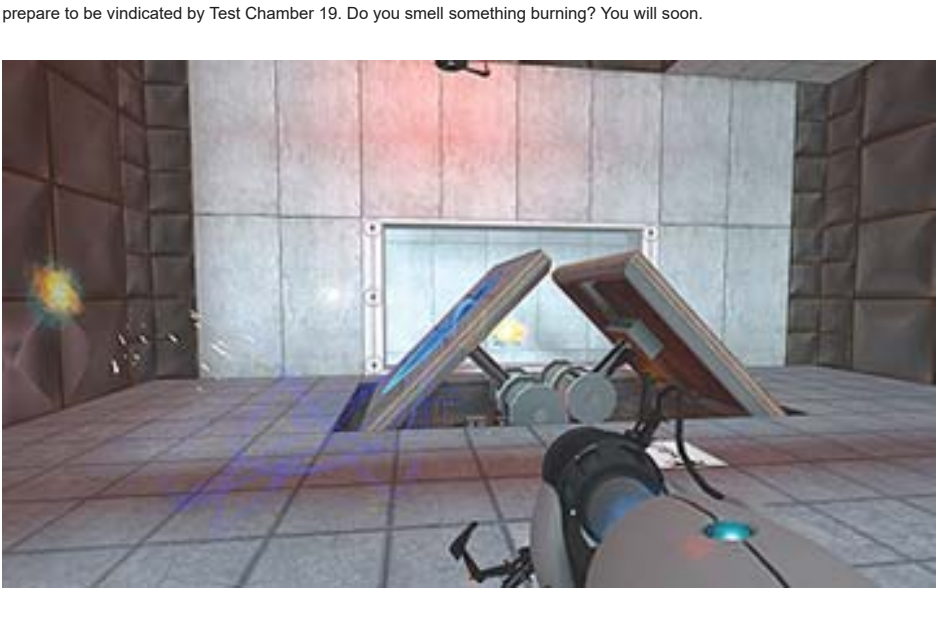
After your third yo-yo, you see an inclined surface aimed at the exit. Place your first portal here, and your second where you'd land. Careen triumphantly into the exit.

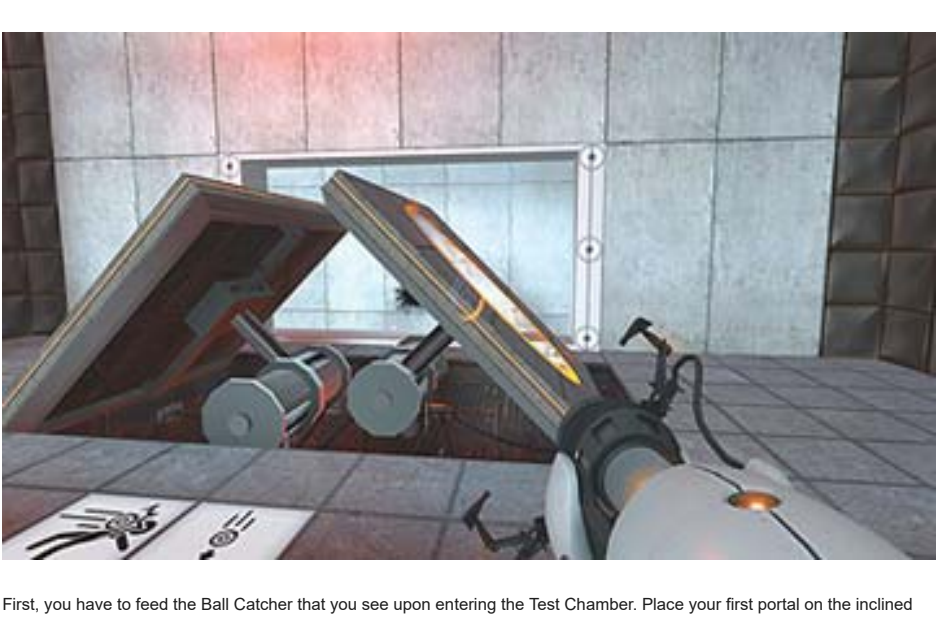
Remember to try the Advanced and Portal Challenge Strategy for this Chamber



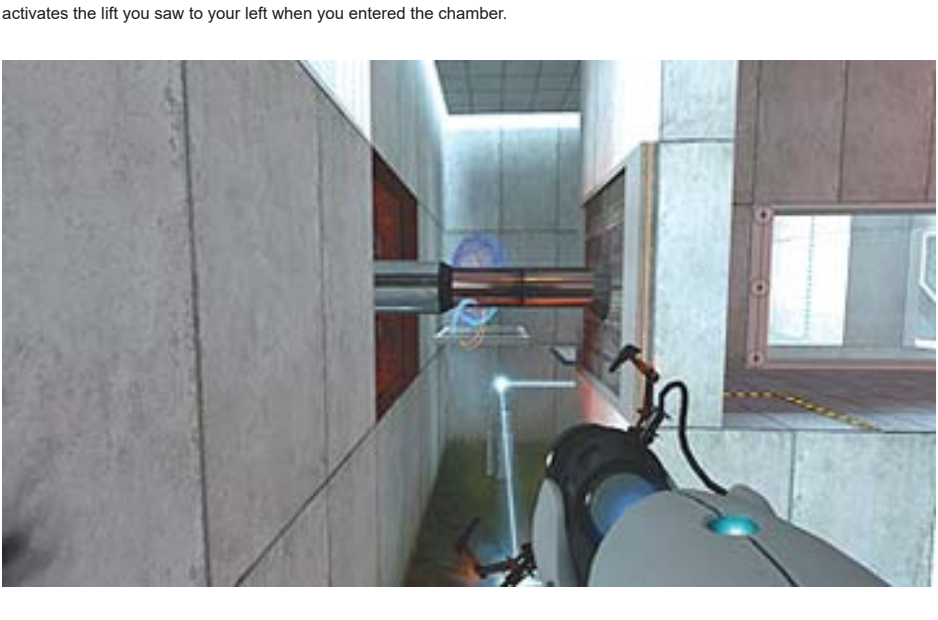
The Escape
Part One

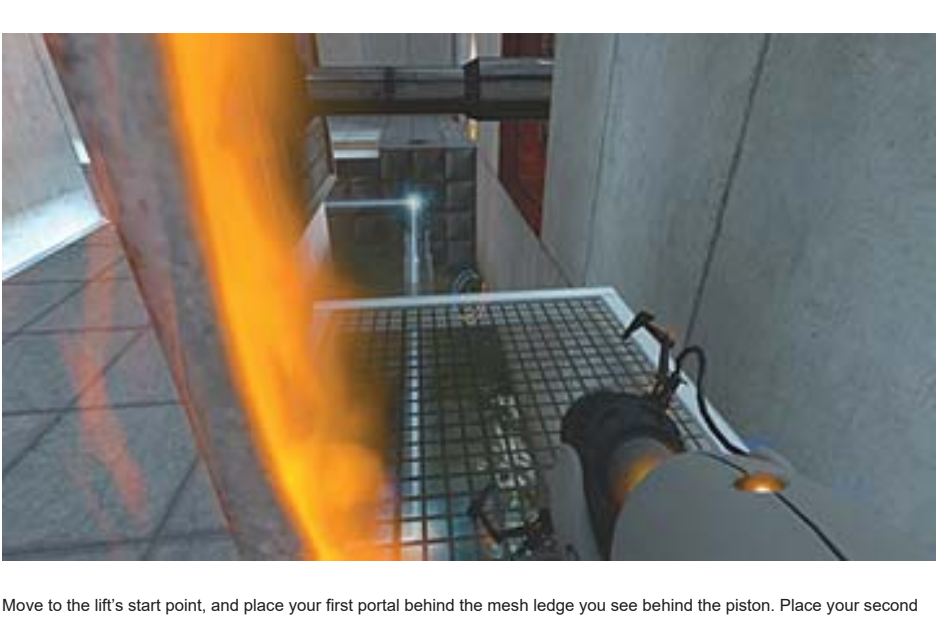
If you felt like the previous exercises were nothing more than deathtraps poorly disguised as scientific experiments, then prepare to be vindicated by Test Chamber 19. Do you smell something burning? You will soon.



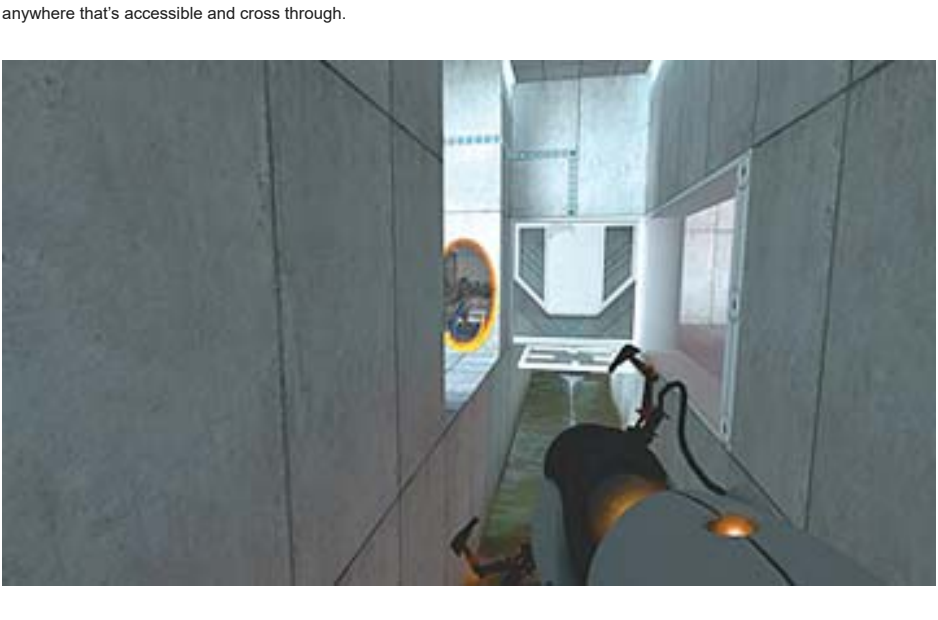


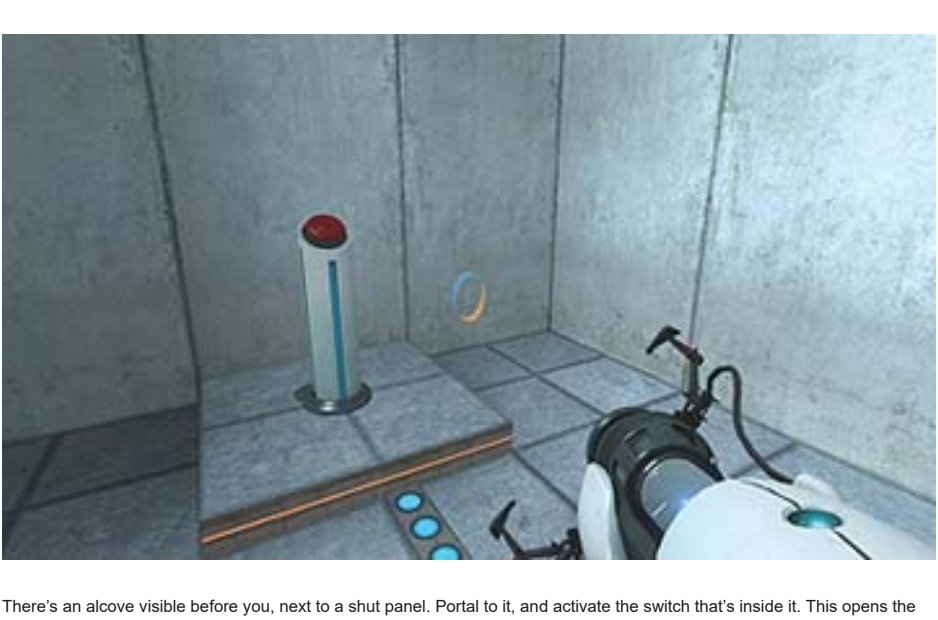
First, you have to feed the Ball Catcher that you see upon entering the Test Chamber. Place your first portal on the inclined panel to the left, and your second on the one to your right. After the ball passes through your second portal, replace it anywhere that won't cause the ball to go in it again. The ball rebounds off the wall, onto the panel, and into the Catcher. This activates the lift you saw to your left when you entered the chamber.



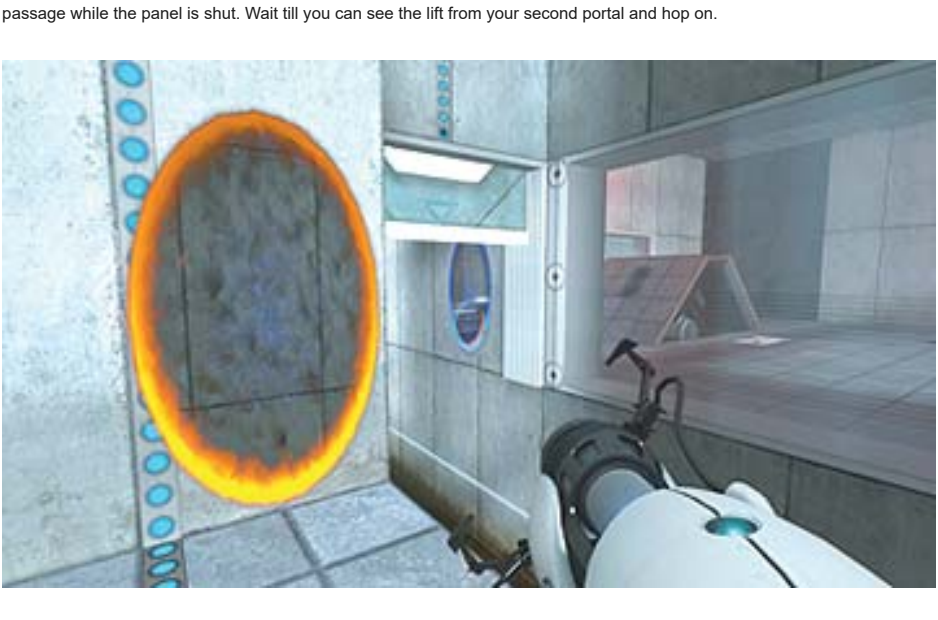


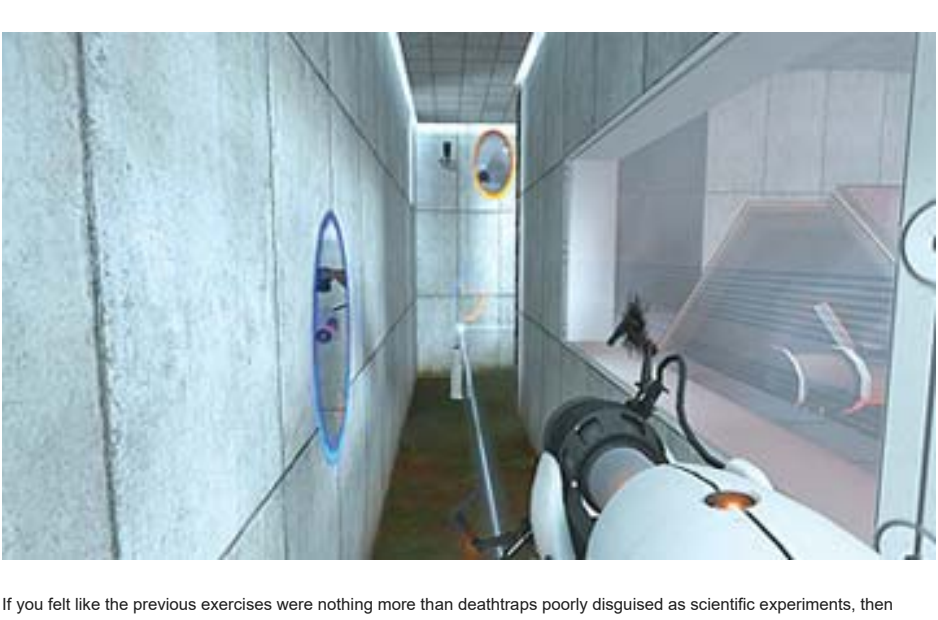
Move to the lift's start point, and place your first portal behind the mesh ledge you see behind the piston. Place your second anywhere that's accessible and cross through.





There's an alcove visible before you, next to a shut panel. Portal to it, and activate the switch that's inside it. This opens the panel blocking the lift's path. Place your first portal behind it, and your second in your alcove. You are now able to access the passage while the panel is shut. Wait till you can see the lift from your second portal and hop on.





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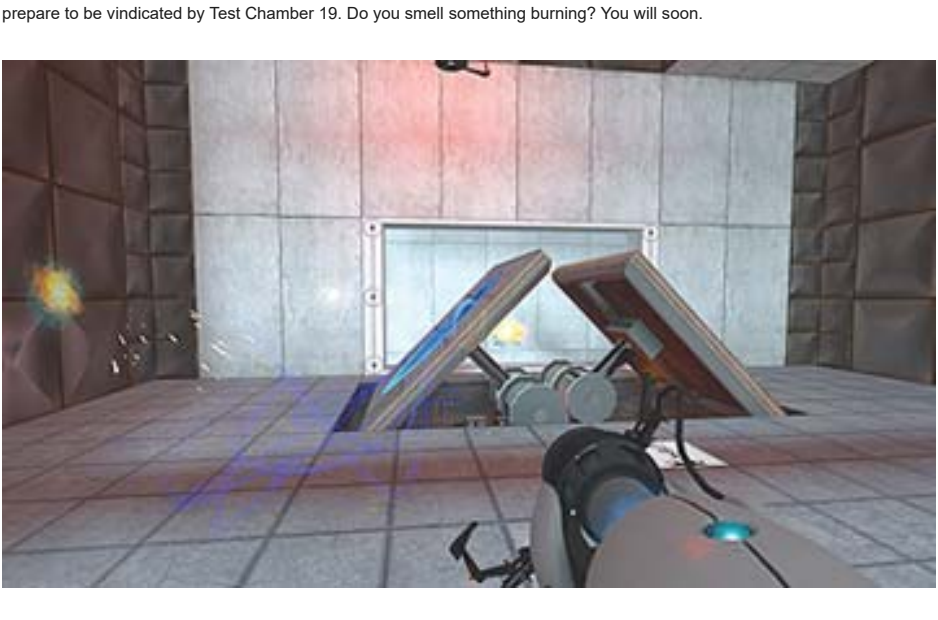

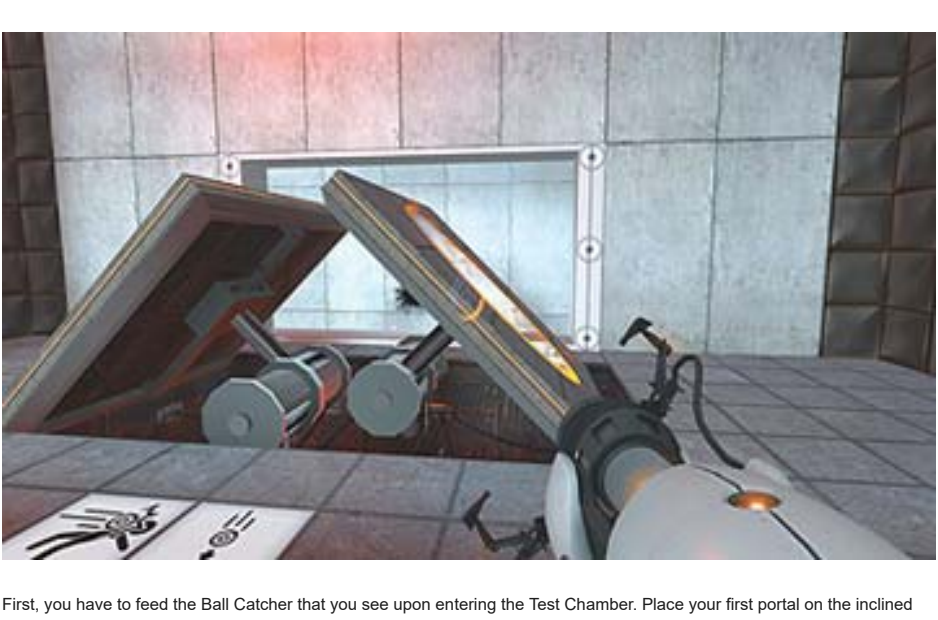

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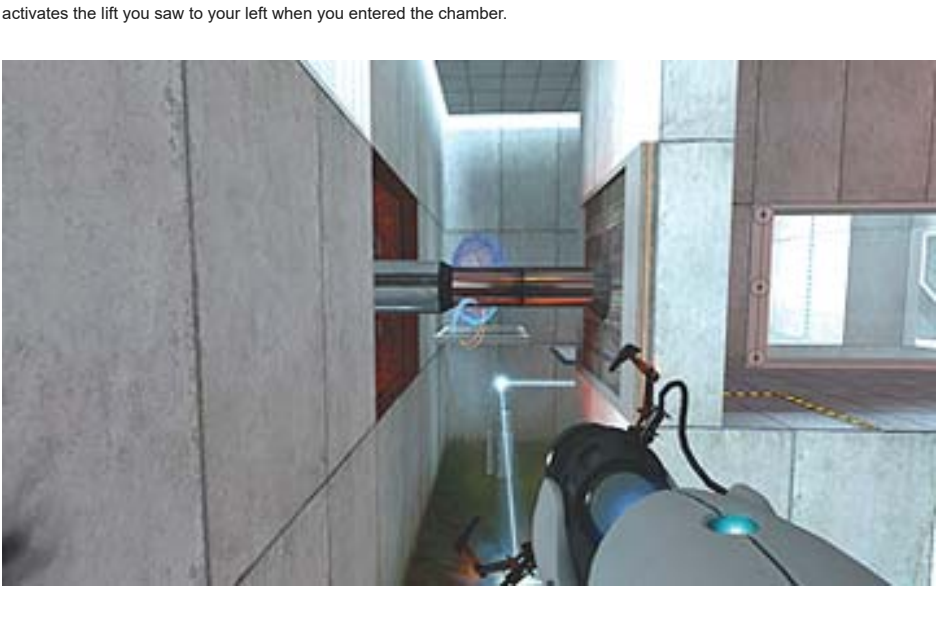

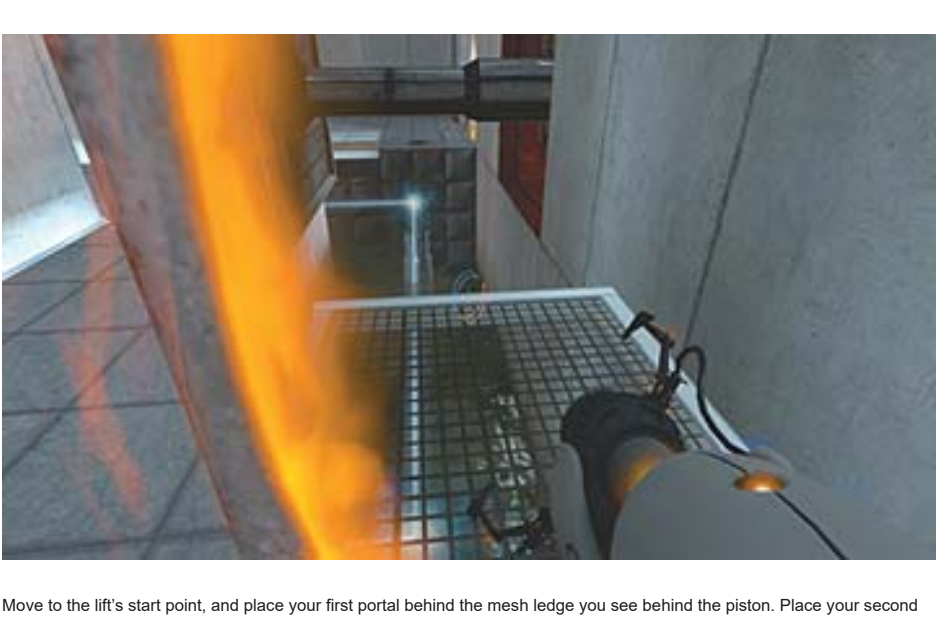

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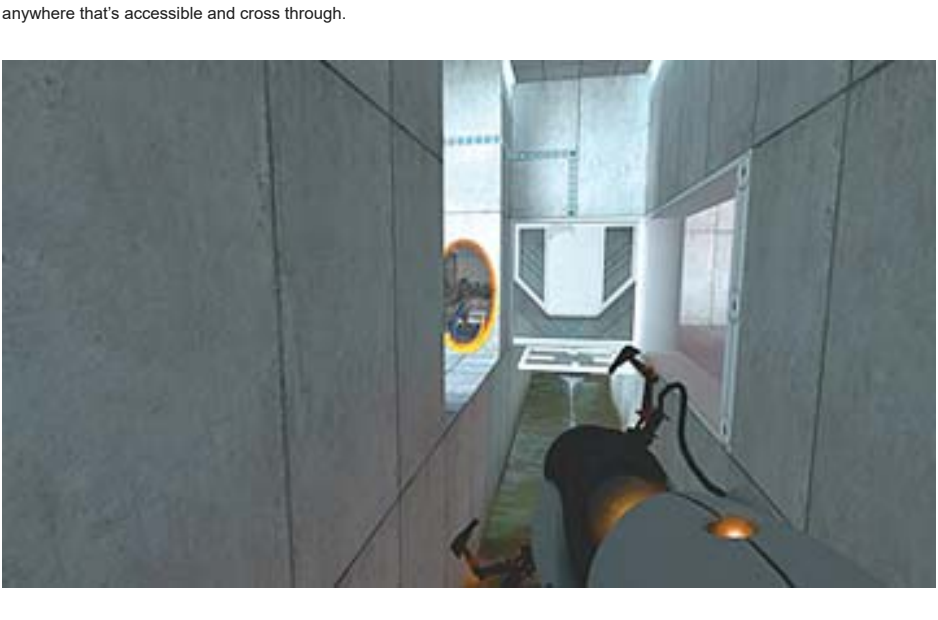

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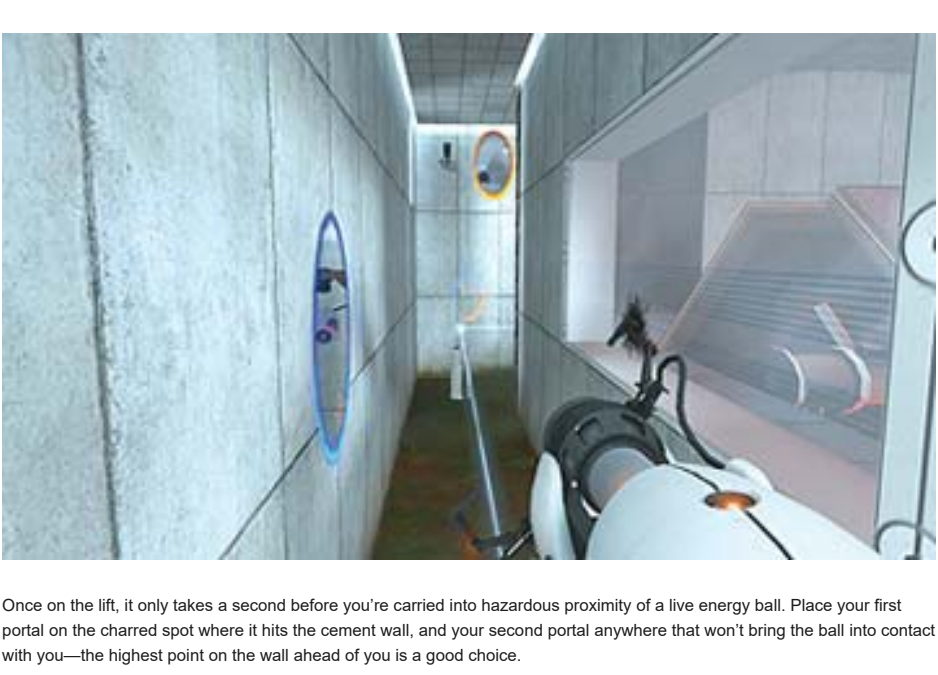
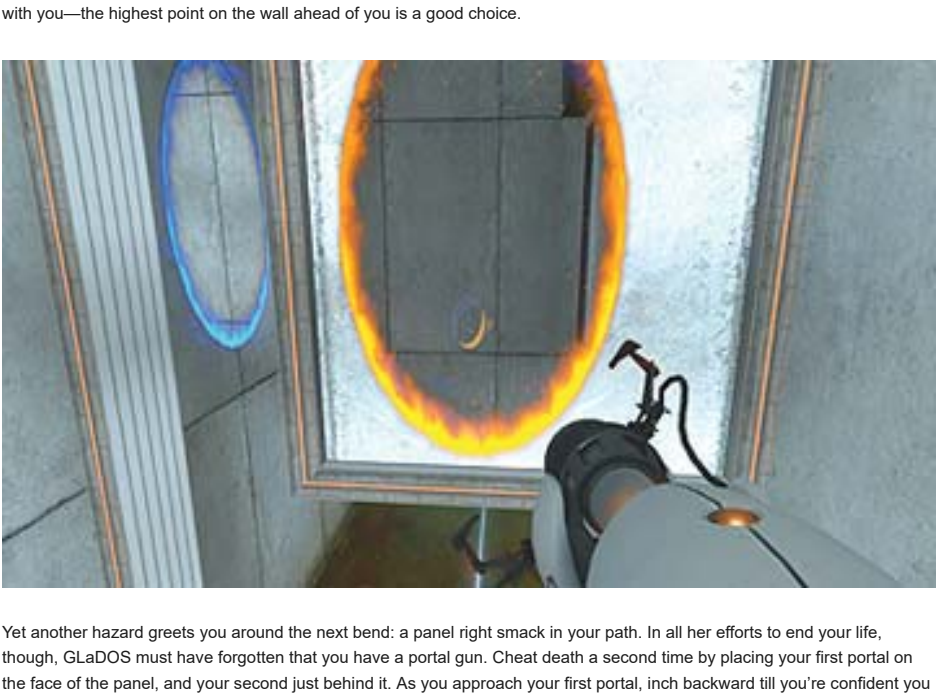
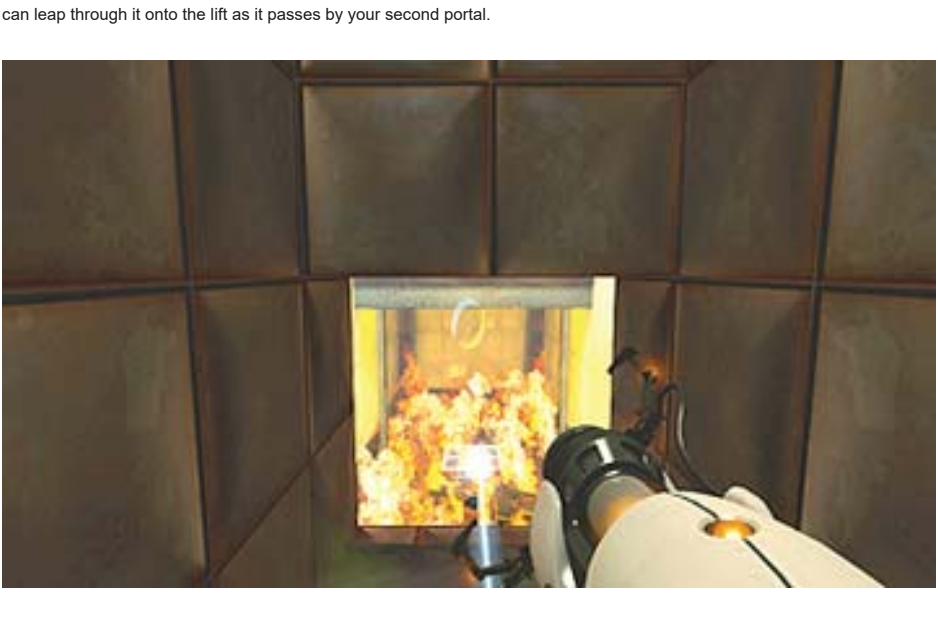
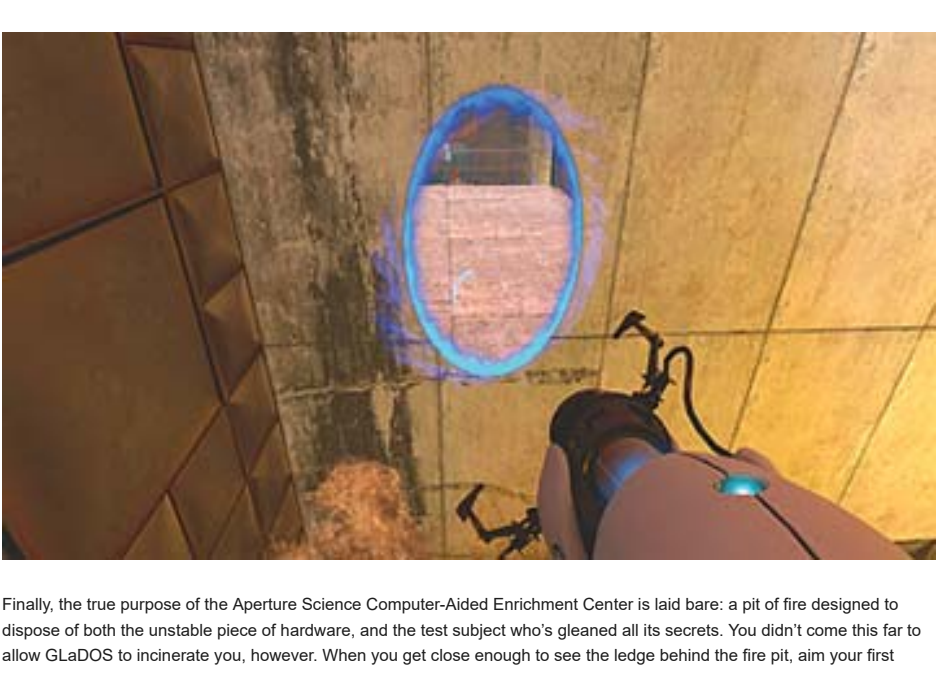


Once on the lift, it only takes a second before you're carried into hazardous proximity of a live energy ball. Place your first portal on the charred spot where it hits the cement wall, and your second portal anywhere that won't bring the ball into contact with you—the highest point on the wall ahead of you is a good choice.

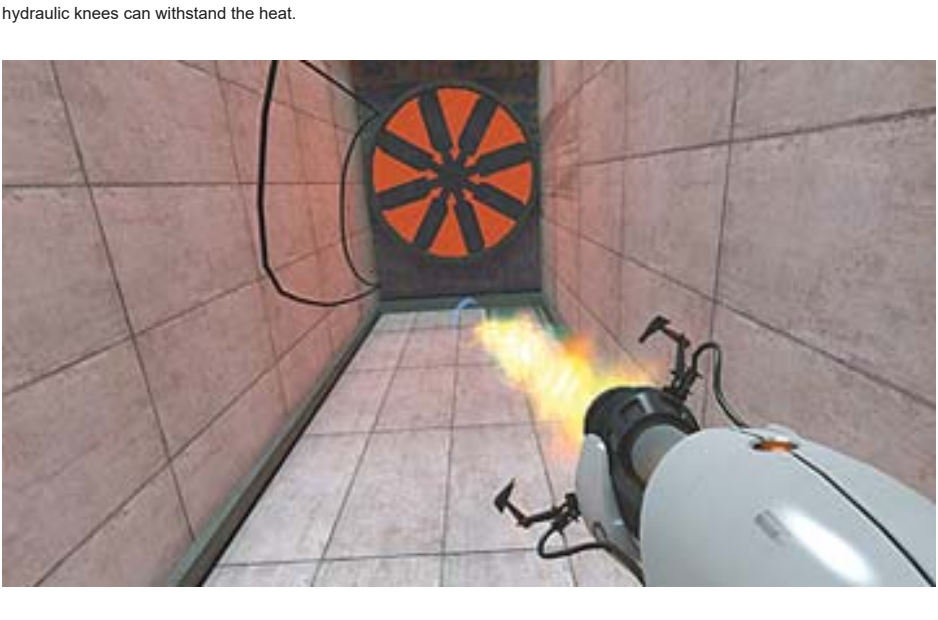


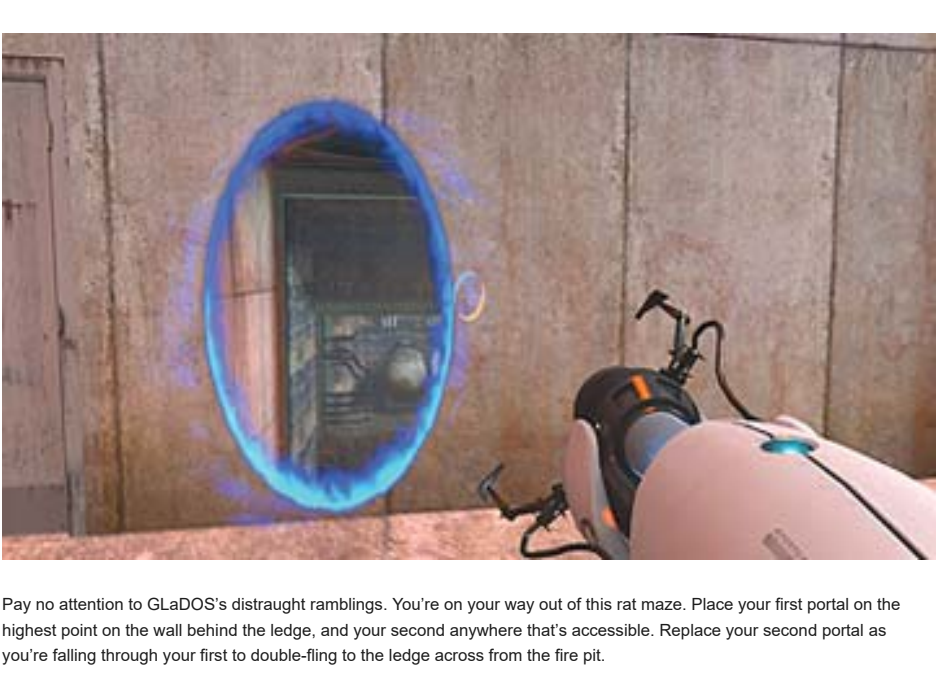
Yet another hazard greets you around the next bend: a panel right smack in your path. In all her efforts to end your life, though, GLaDOS must have forgotten that you have a portal gun. Cheat death a second time by placing your first portal on the face of the panel, and your second just behind it. As you approach your first portal, inch backward till you're confident you can leap through it onto the lift as it passes by your second portal.



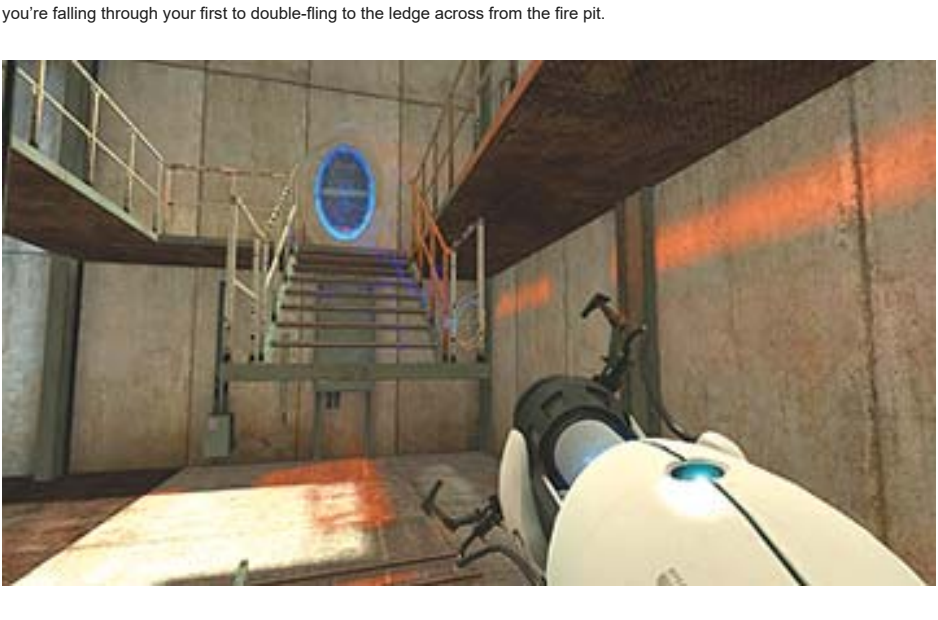


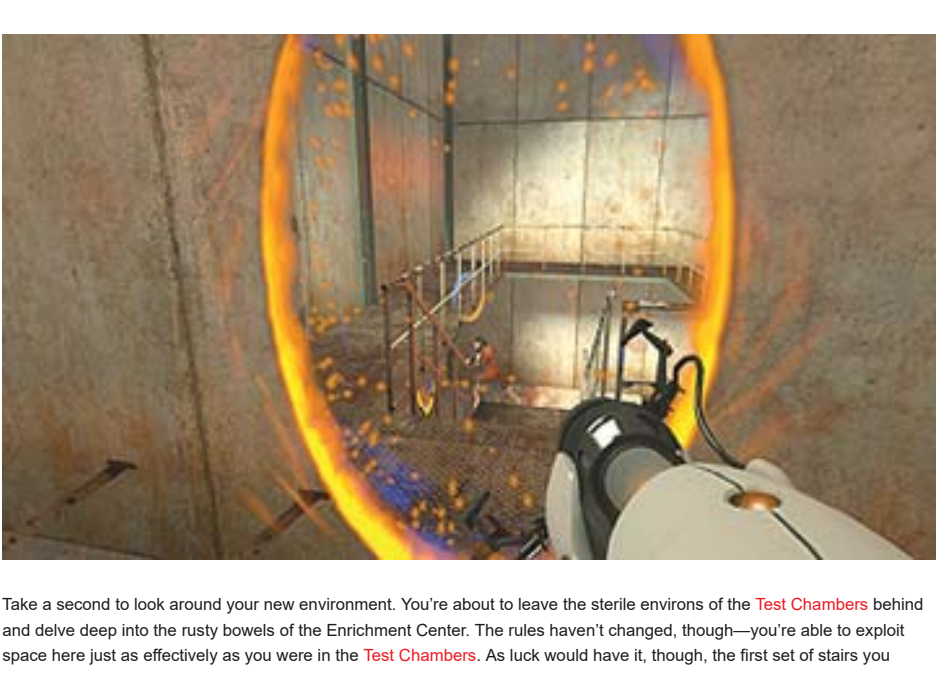
Finally, the true purpose of the Aperture Science Computer-Aided Enrichment Center is laid bare: a pit of fire designed to dispose of both the unstable piece of hardware, and the test subject who's gleaned all its secrets. You didn't come this far to allow GLaDOS to incinerate you, however. When you get close enough to see the ledge behind the fire pit, aim your first portal at the wall behind it. Place your second just below on either the right or left walls, and jump through. Don't worry—your hydraulic knees can withstand the heat.



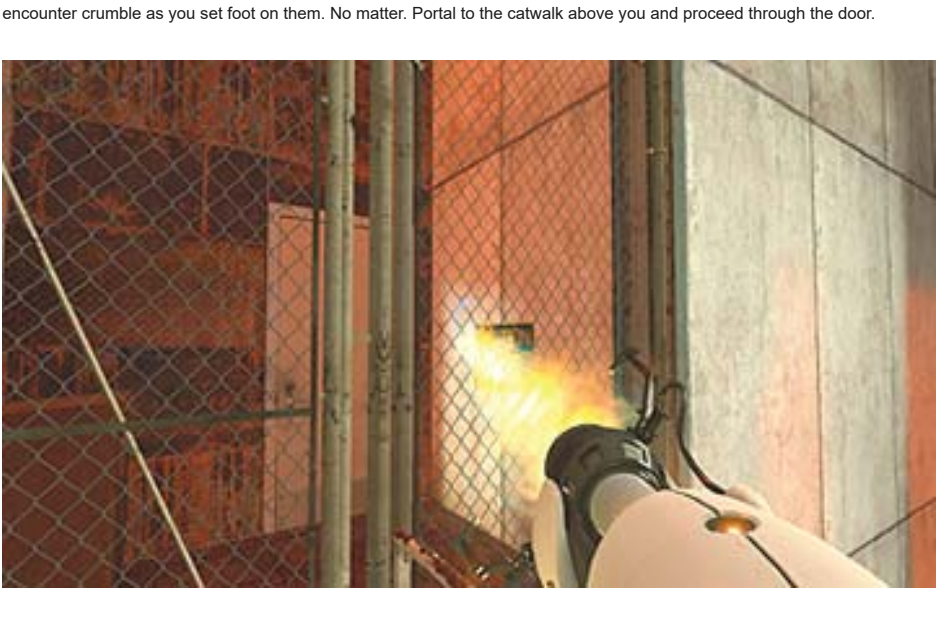


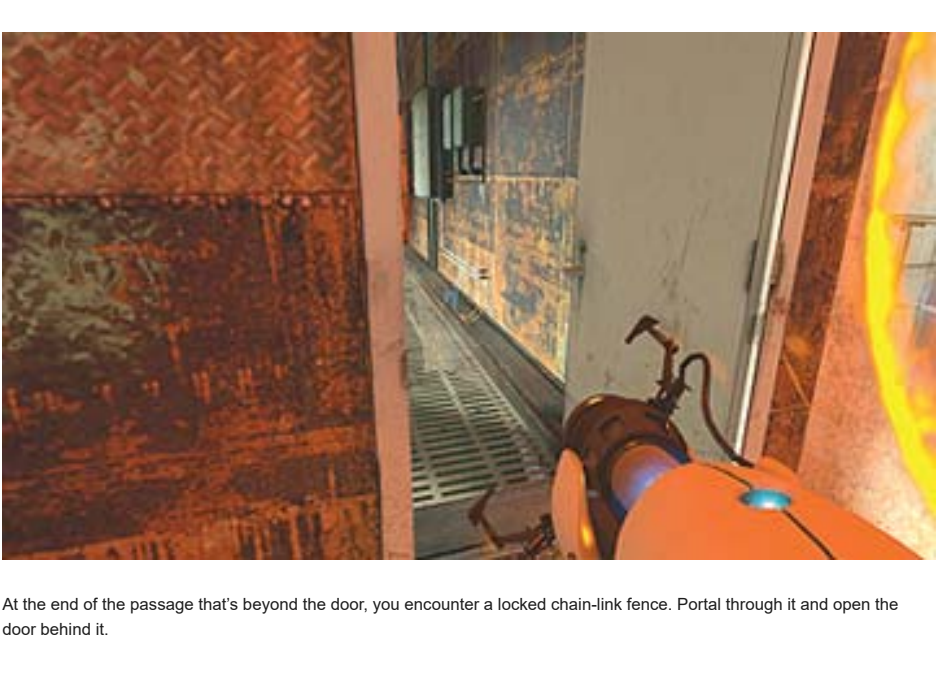
Pay no attention to GLaDOS's distraught ramblings. You're on your way out of this rat maze. Place your first portal on the highest point on the wall behind the ledge, and your second anywhere that's accessible. Replace your second portal as you're falling through your first to double-fling to the ledge across from the fire pit.



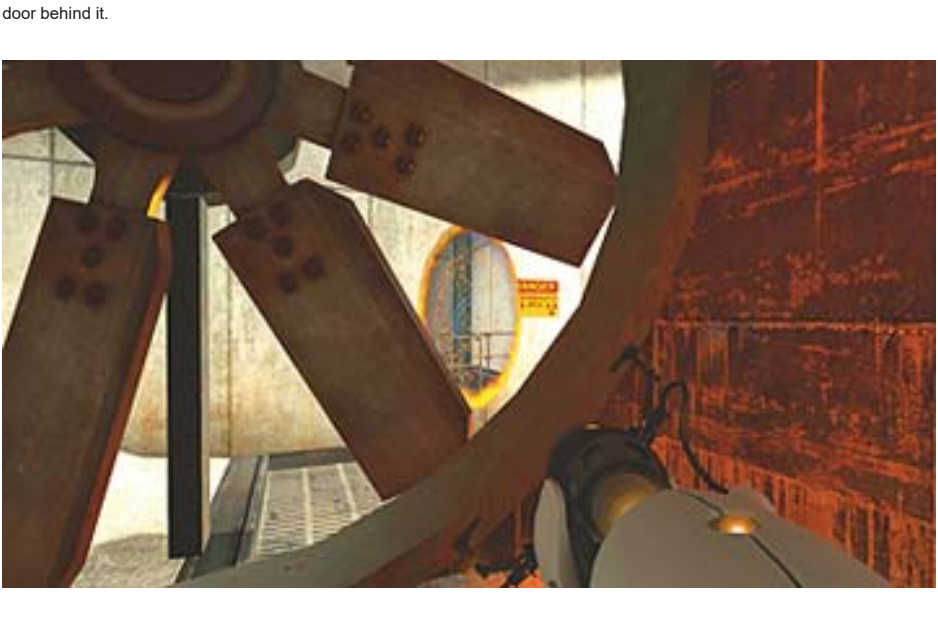


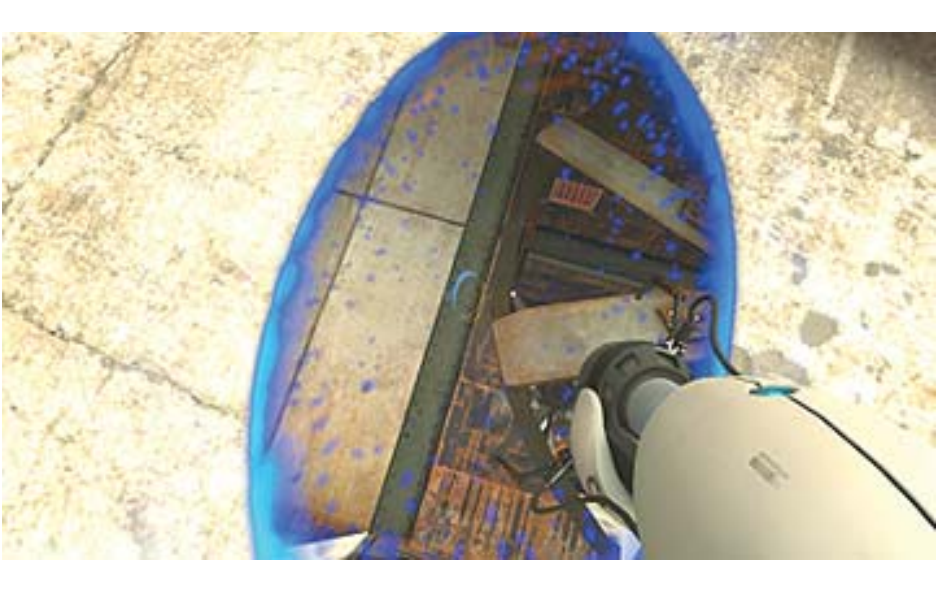
Take a second to look around your new environment. You're about to leave the sterile environs of the Test Chambers behind and delve deep into the rusty bowels of the Enrichment Center. The rules haven't changed, though—you're able to exploit space here just as effectively as you were in the Test Chambers. As luck would have it, though, the first set of stairs you encounter crumble as you set foot on them. No matter. Portal to the catwalk above you and proceed through the door.

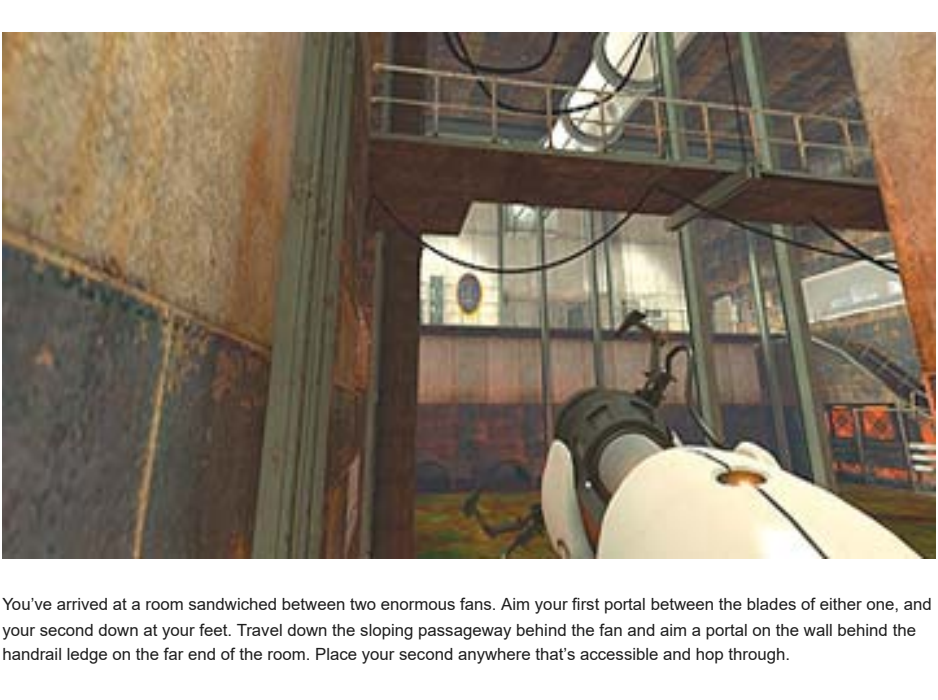




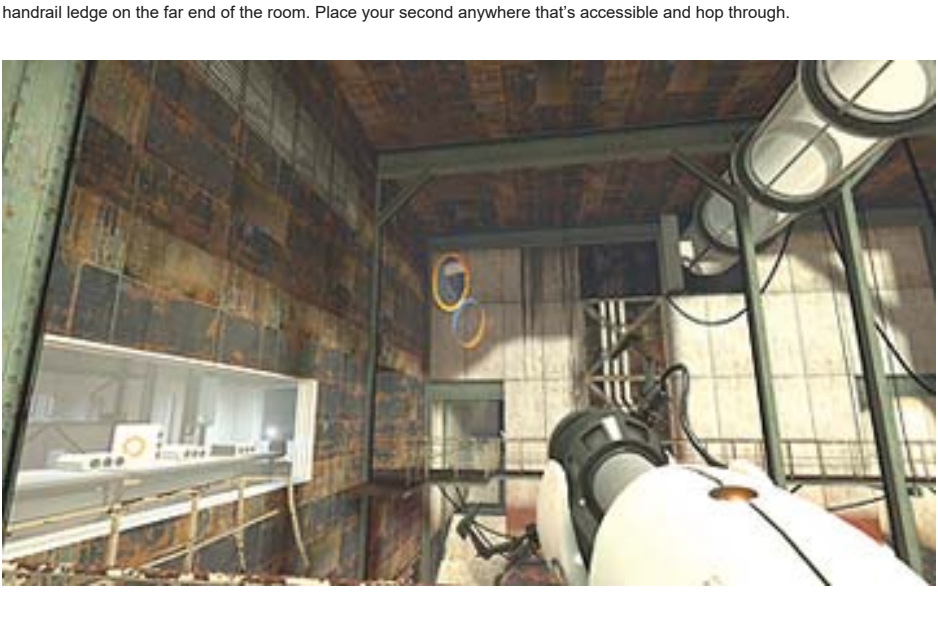
At the end of the passage that's beyond the door, you encounter a locked chain-link fence. Portal through it and open the door behind it.

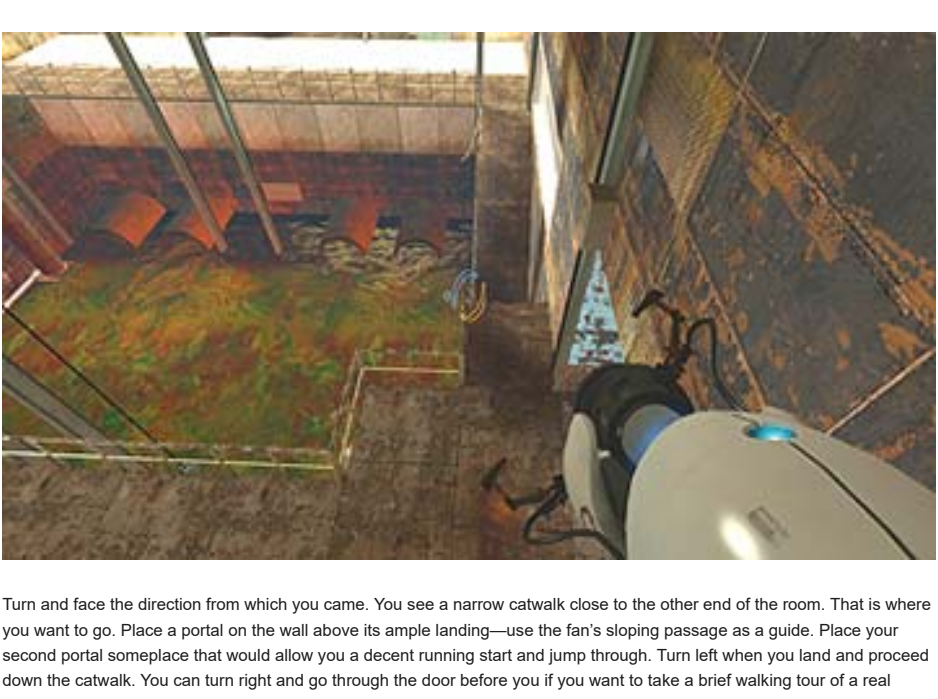




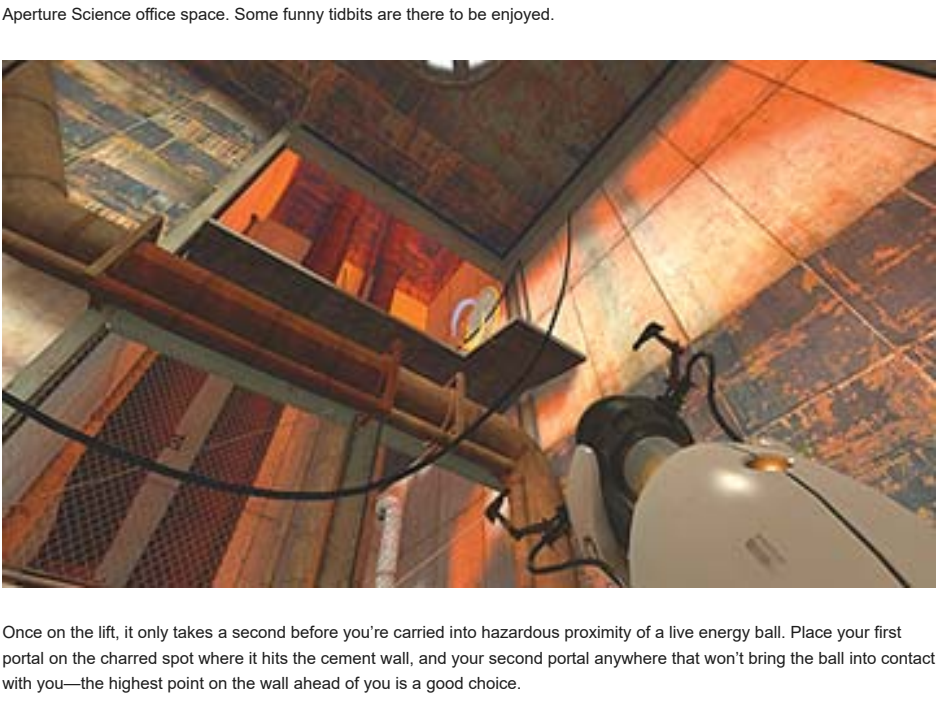


You've arrived at a room sandwiched between two enormous fans. Aim your first portal between the blades of either one, and your second down at your feet. Travel down the sloping passageway behind the fan and aim a portal on the wall behind the handrail ledge on the far end of the room. Place your second anywhere that's accessible and hop through.





Turn and face the direction from which you came. You see a narrow catwalk close to the other end of the room. That is where you want to go. Place a portal on the wall above its ample landing—use the fan's sloping passage as a guide. Place your second portal someplace that would allow you a decent running start and jump through. Turn left when you land and proceed down the catwalk. You can turn right and go through the door before you if you want to take a brief walking tour of a real Aperture Science office space. Some funny tidbits are there to be enjoyed.



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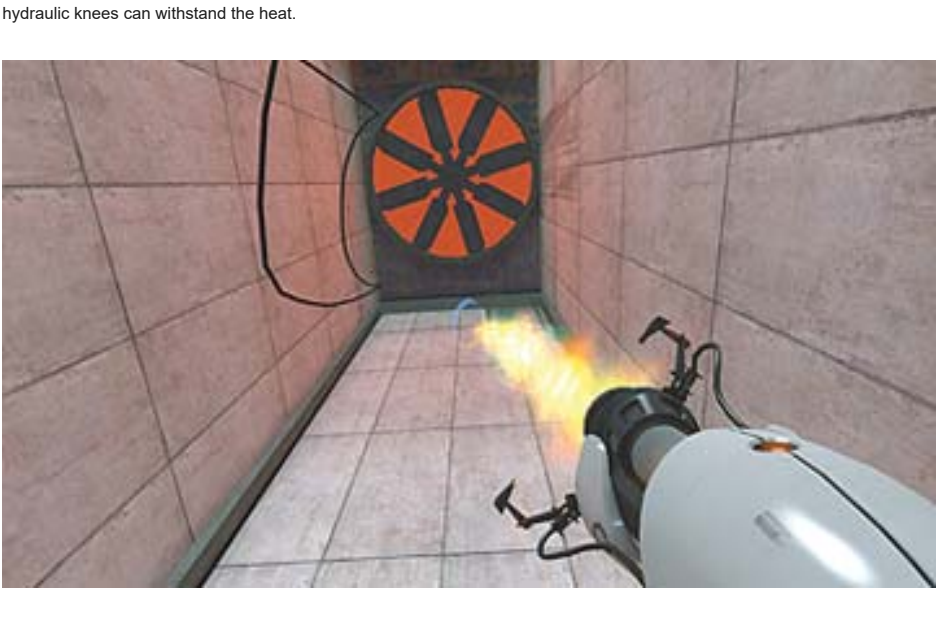

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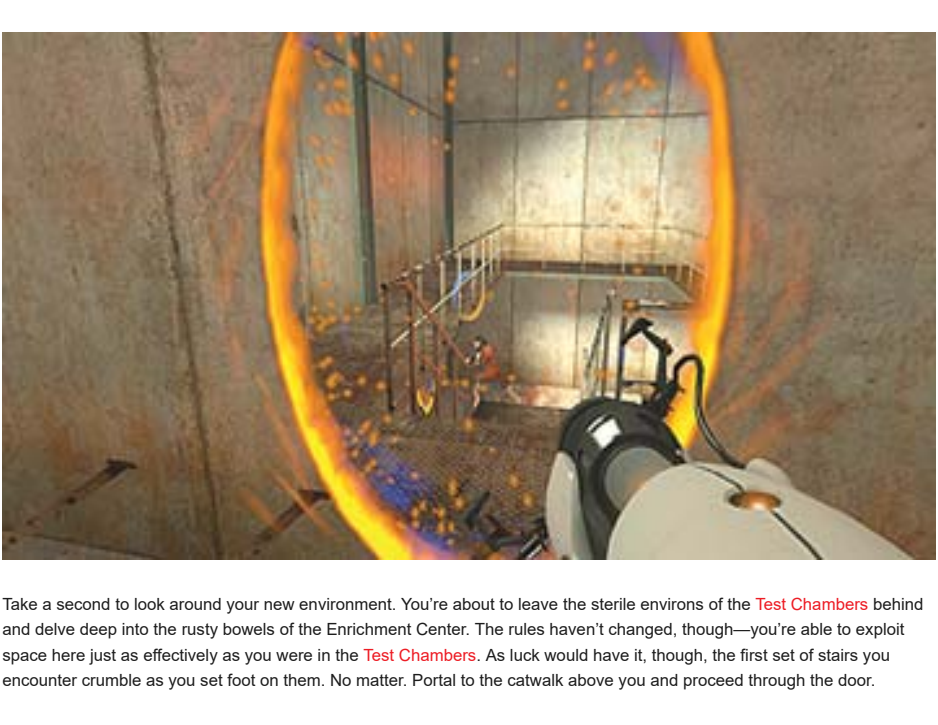

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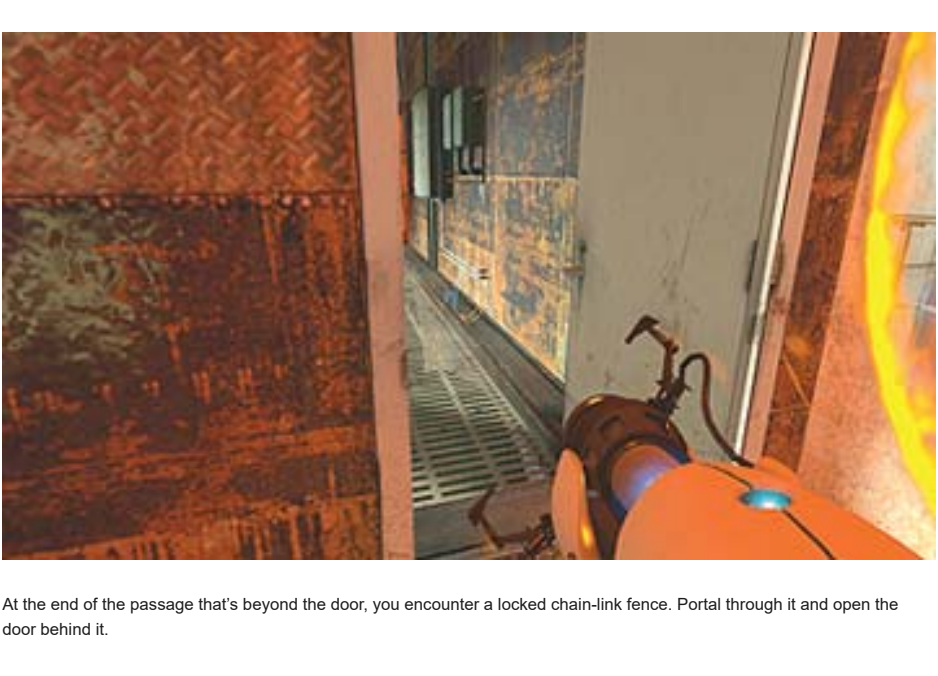

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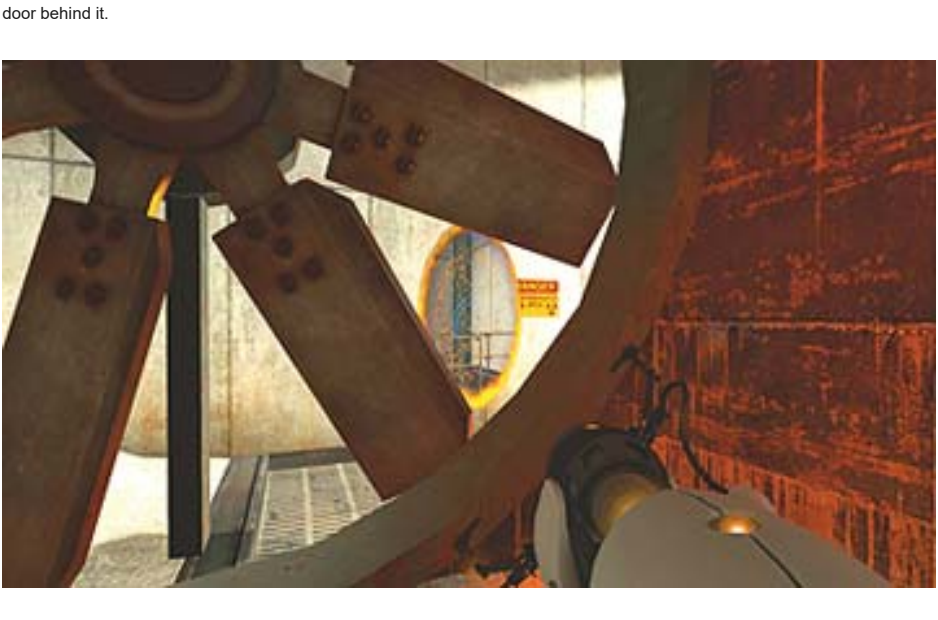

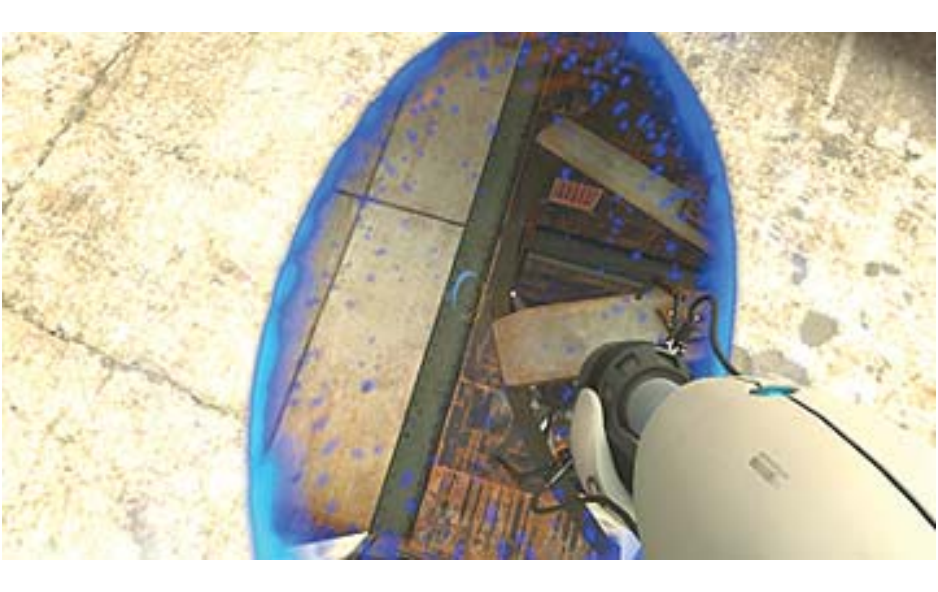

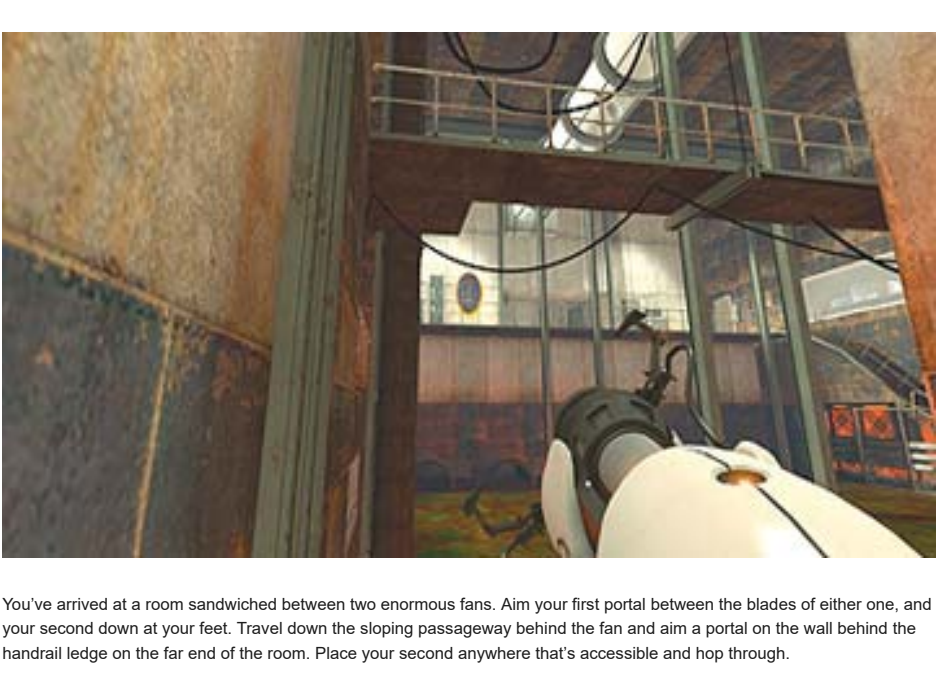

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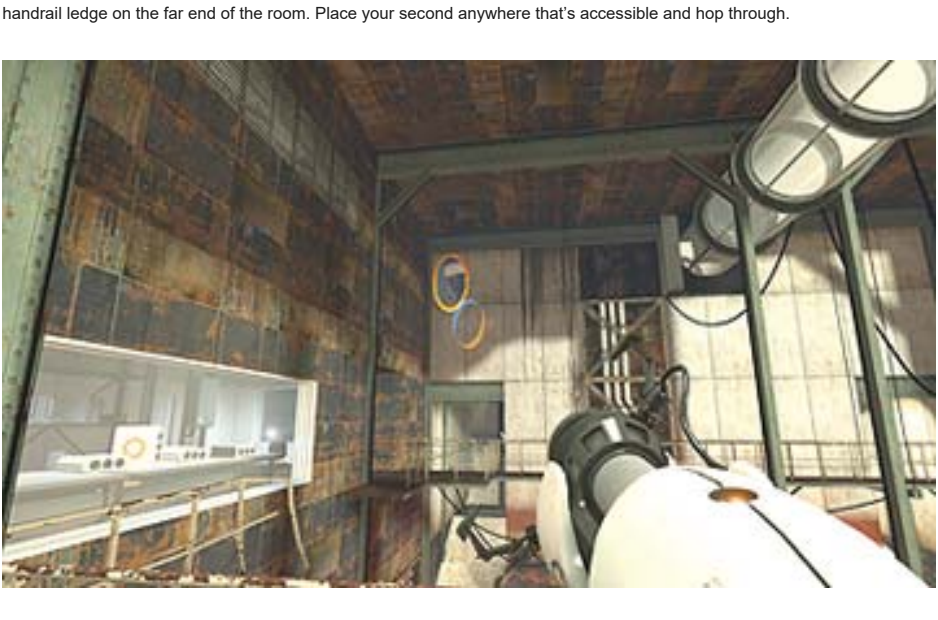

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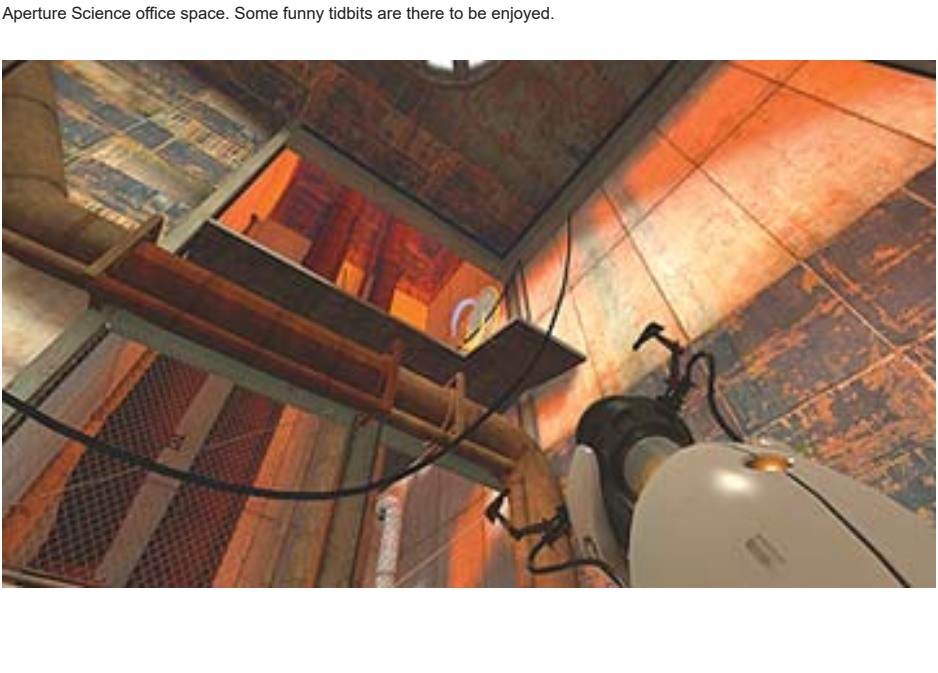
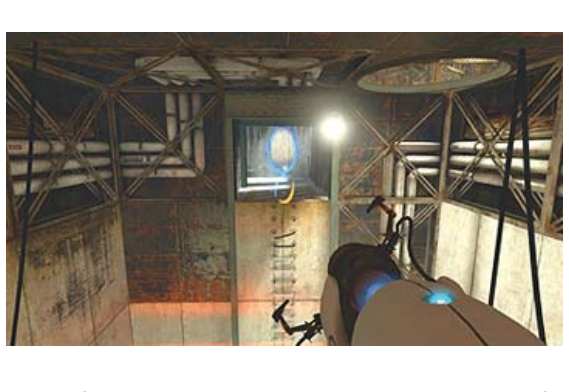
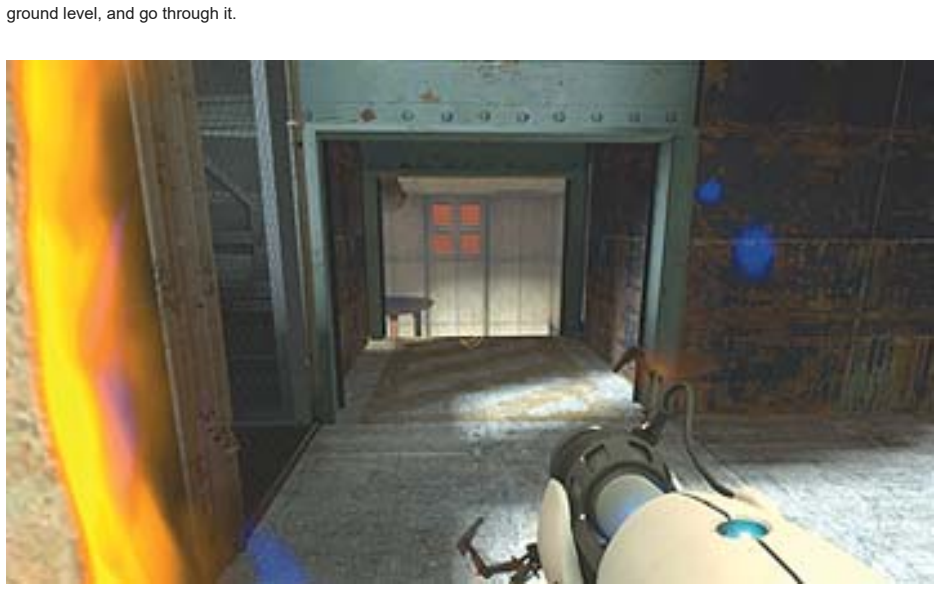


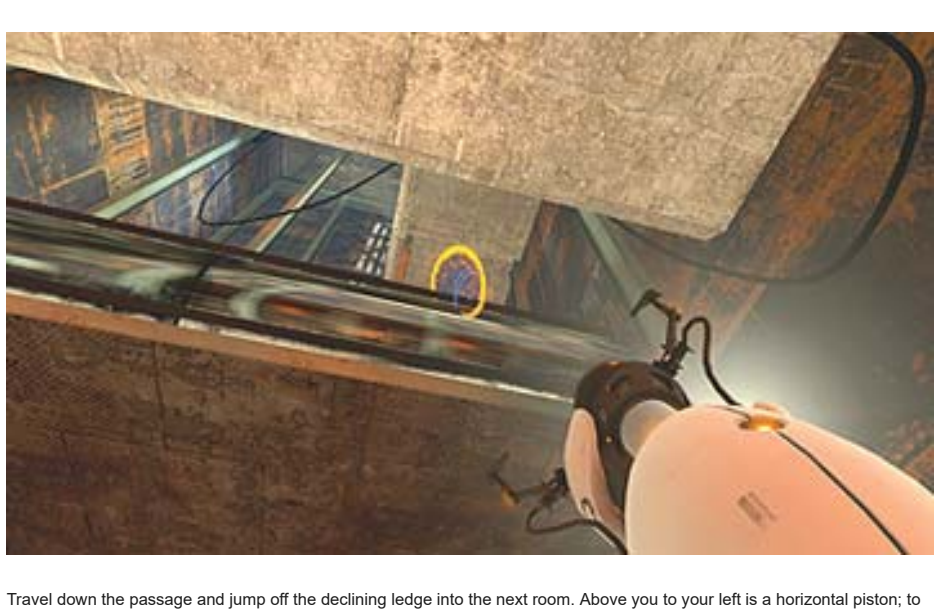
The Escape

Part Two

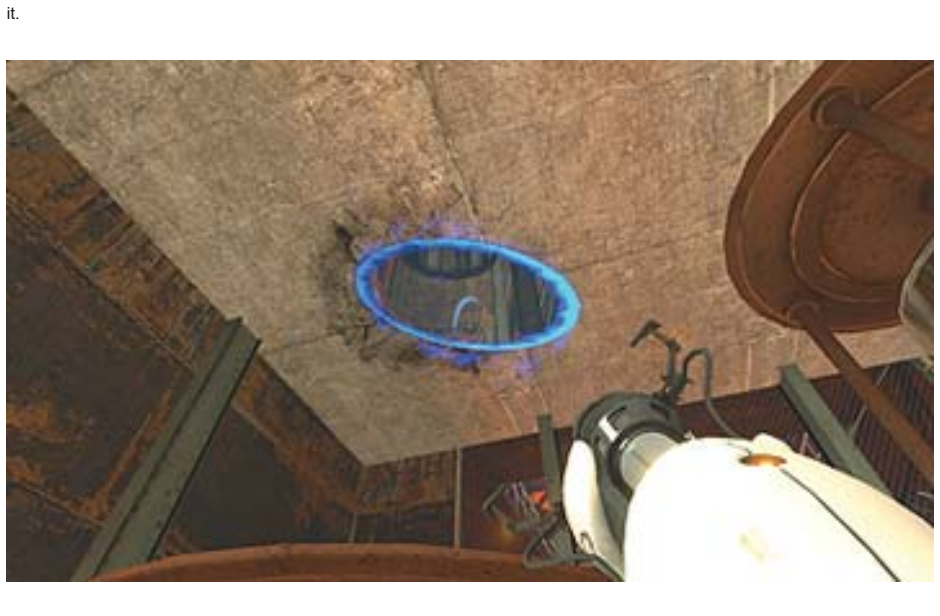


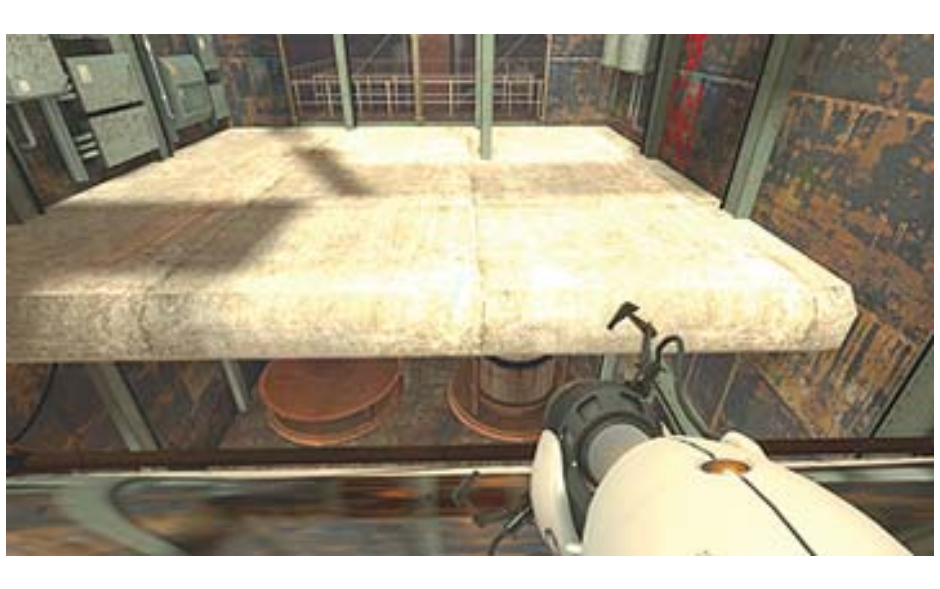
A series of enormous, vertically moving pistons populate the next room. Climb onto the one right in the center and fire your first portal into the end of the passage you see once it's fully extended. Hop off the piston, place your second portal on the ground level, and go through it.

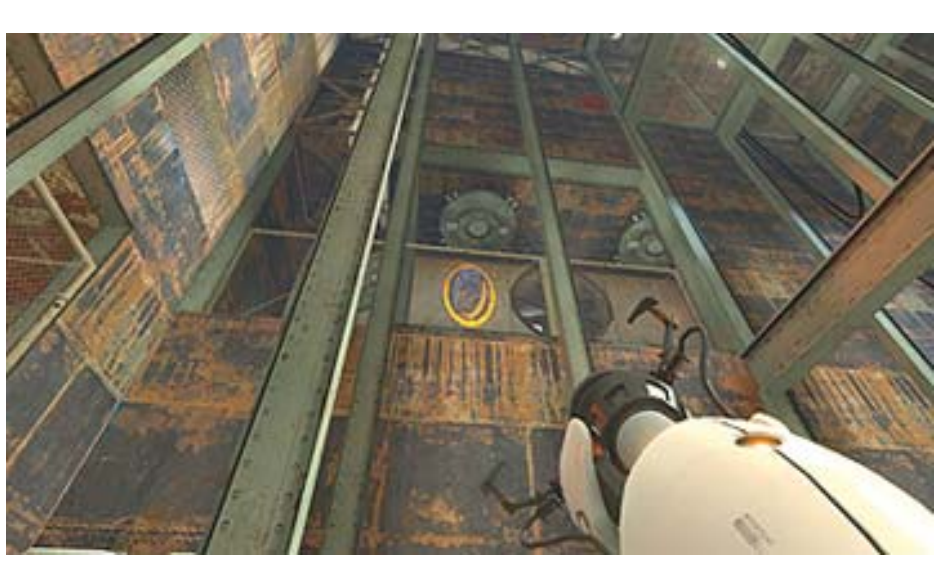


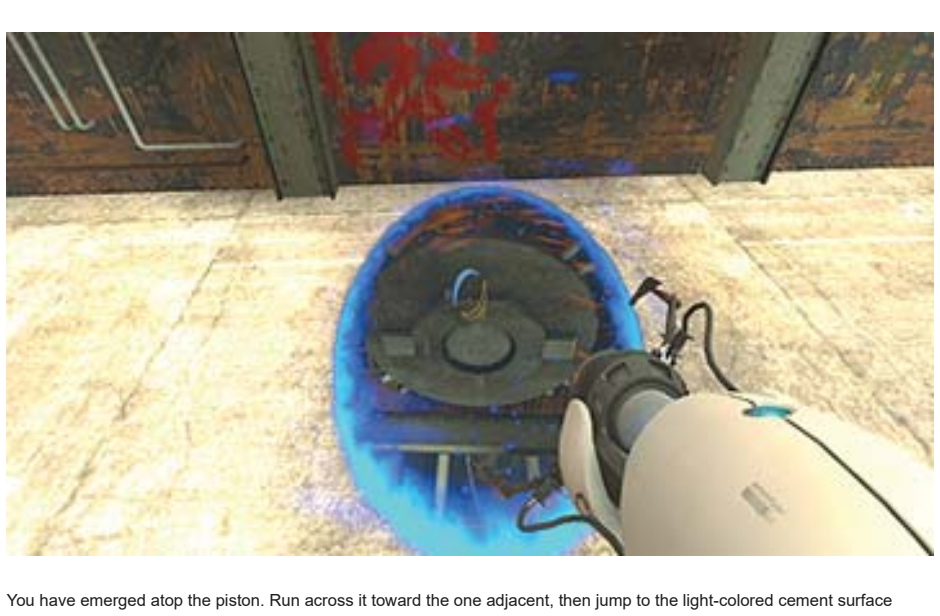


Travel down the passage and jump off the declining ledge into the next room. Above you to your left is a horizontal piston; to your right are two vertical pistons. When the horizontal piston is retracted, it reveals a small stretch of portal-friendly surface above it. Place your first portal here. Place your second where one of the vertical pistons impacts the ceiling and go through it.

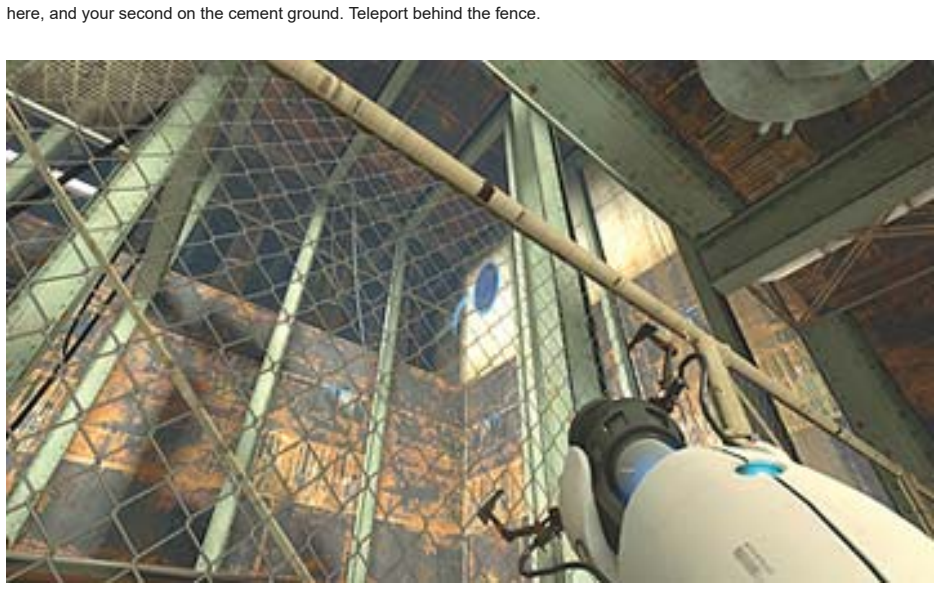


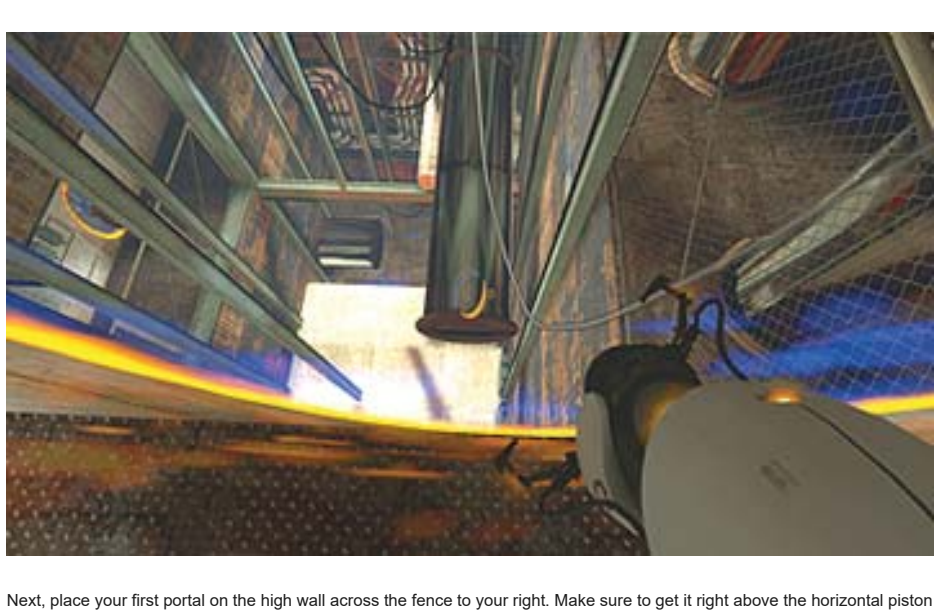




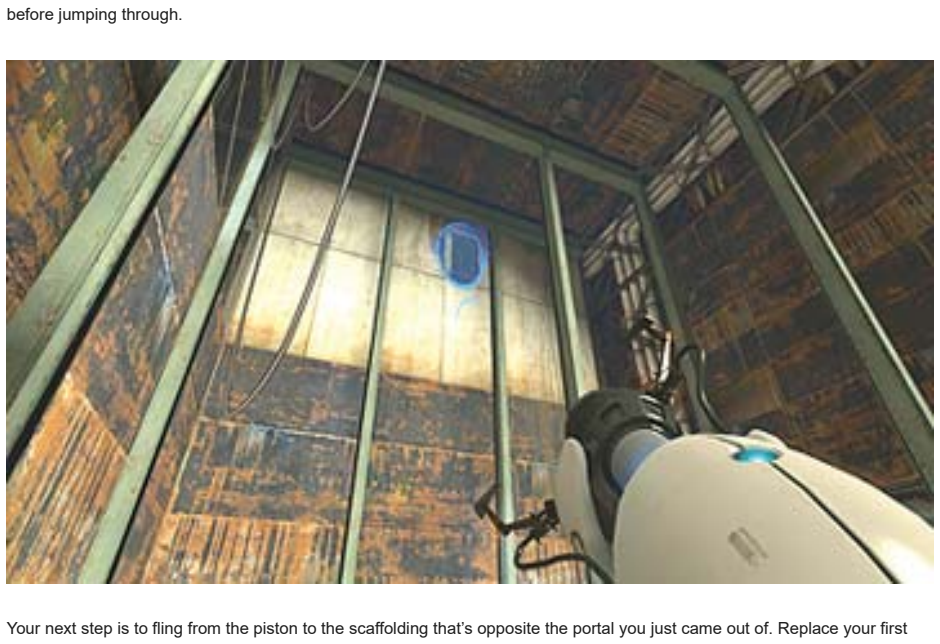


You have emerged atop the piston. Run across it toward the one adjacent, then jump to the light-colored cement surface ahead of you. There's a portal-friendly surface above you to your right, behind the chain-link fence. Place your first portal here, and your second on the cement ground. Teleport behind the fence.

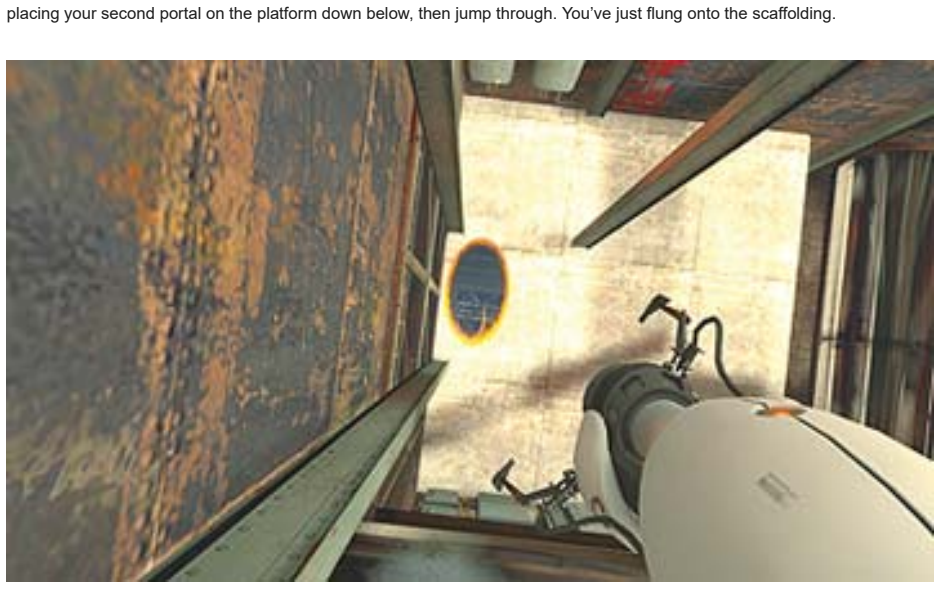


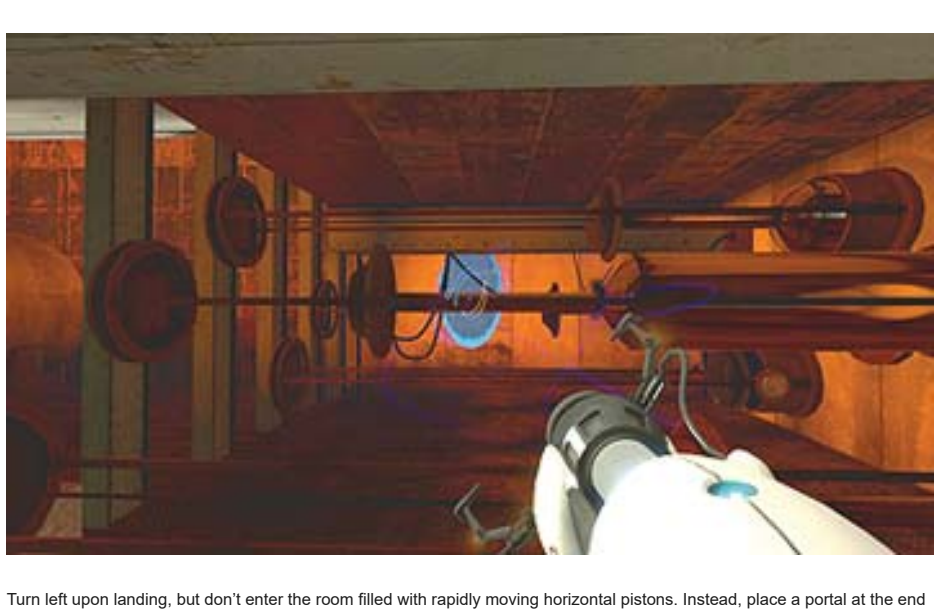


Next, place your first portal on the high wall across the fence to your right. Make sure to get it right above the horizontal piston that travels below it. Place your second anywhere accessible. Wait till you can see the piston through your second portal before jumping through.

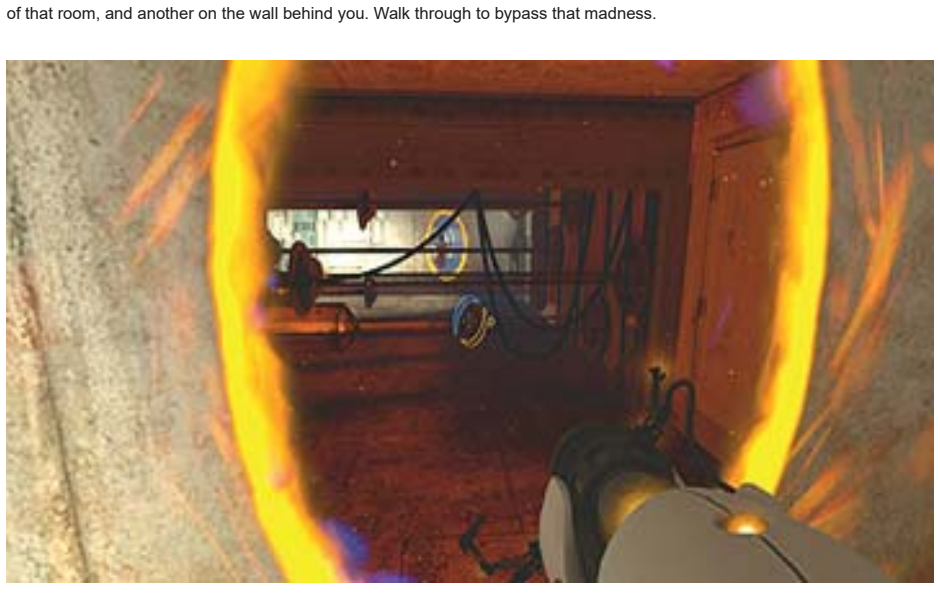


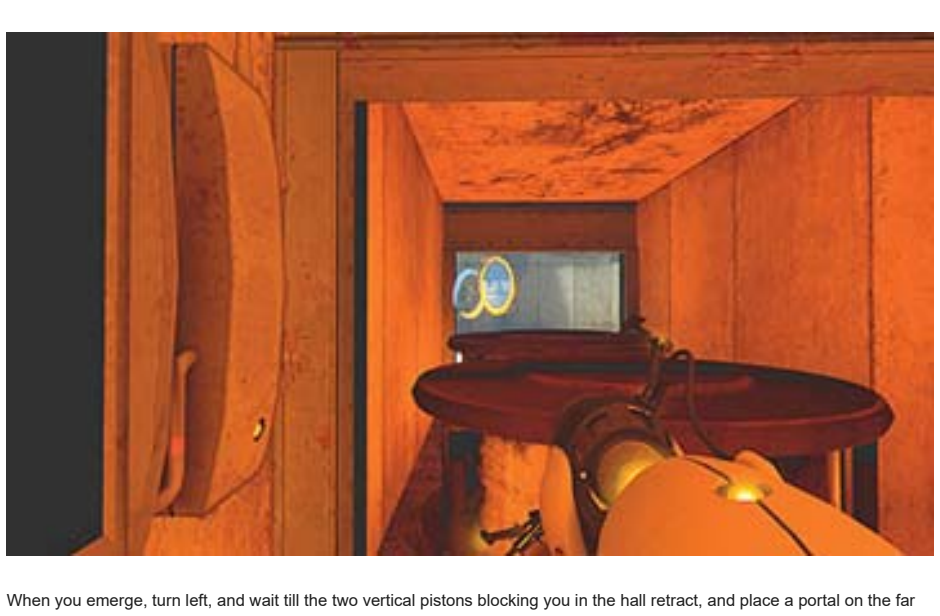
Your next step is to fling from the piston to the scaffolding that's opposite the portal you just came out of. Replace your first portal a few yards to the right of the one you just came through. Wait till the piston you're on reaches its end point before placing your second portal on the platform down below; then jump through. You've just flung onto the scaffolding.



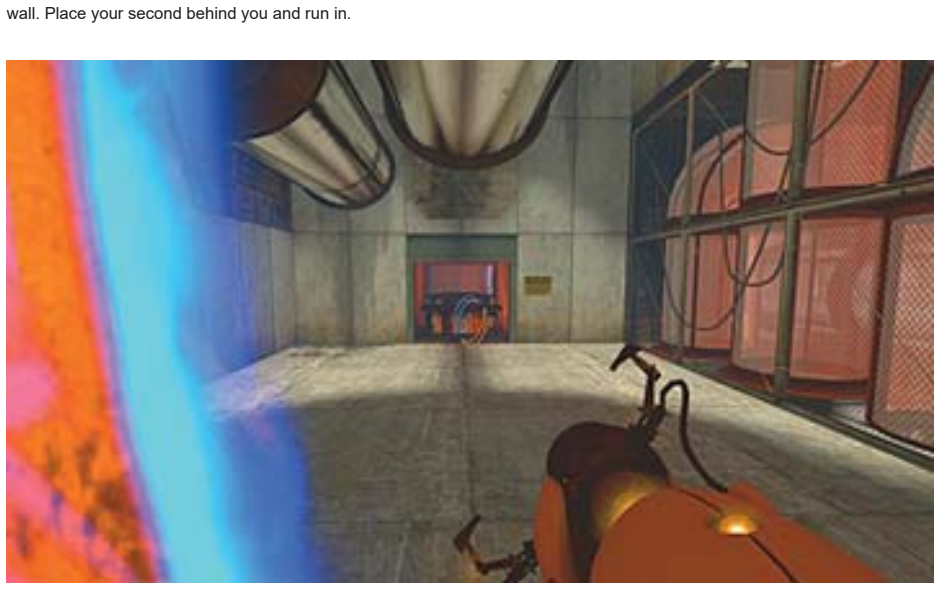


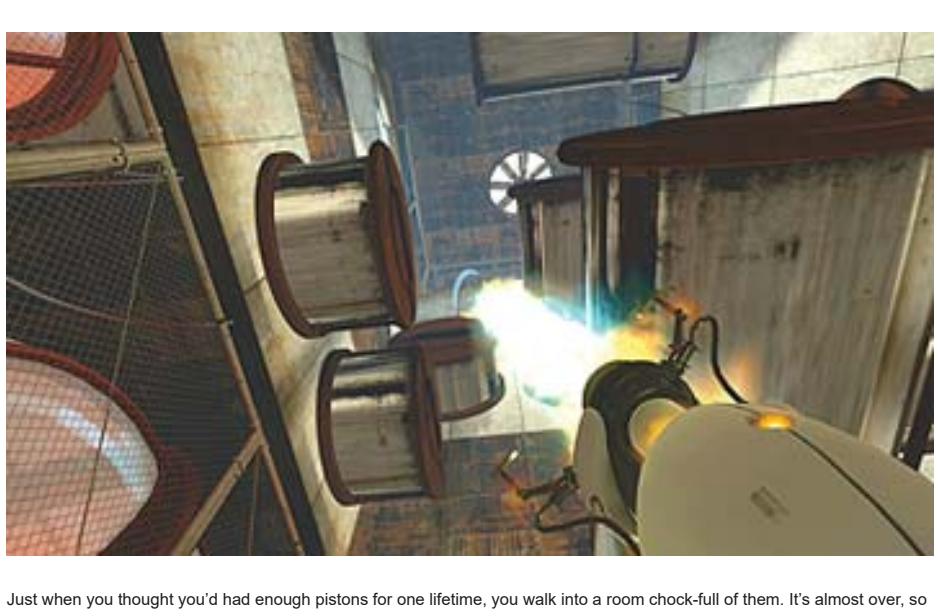
Turn left upon landing, but don't enter the room filled with rapidly moving horizontal pistons. Instead, place a portal at the end of that room, and another on the wall behind you. Walk through to bypass that madness.



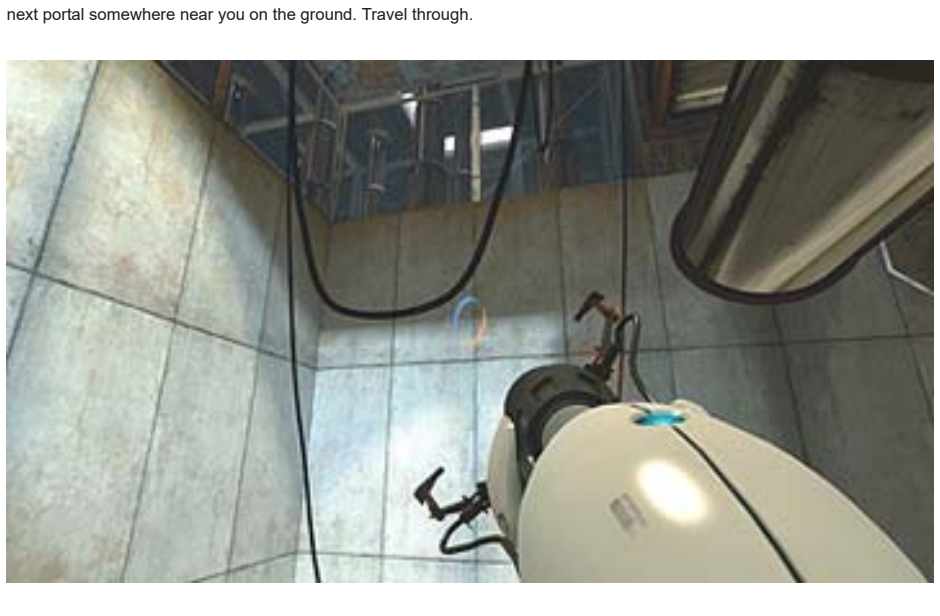


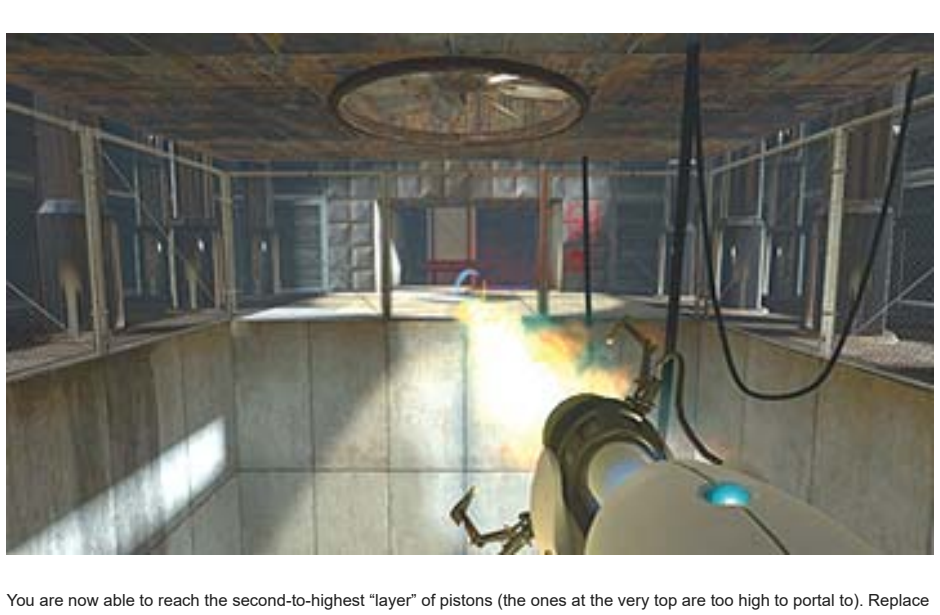
When you emerge, turn left, and wait till the two vertical pistons blocking you in the hall retract, and place a portal on the far wall. Place your second behind you and run in.



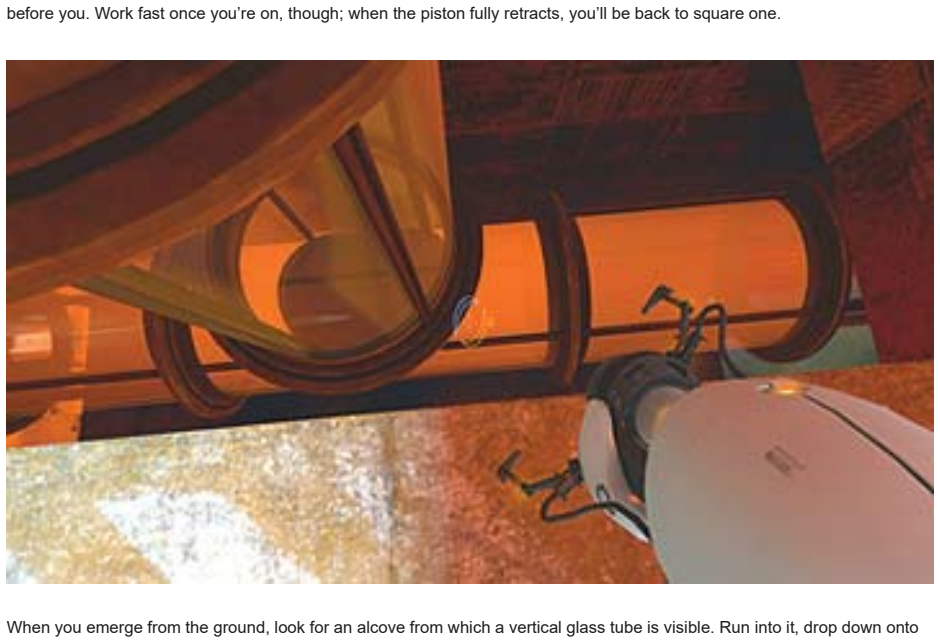


Just when you thought you'd had enough pistons for one lifetime, you walk into a room chock-full of them. It's almost over, so hang in there. Your goal is to place a portal on the floor of the room above, which surrounds this piston-ridden pit. You're going to have to gain some altitude to do this. Fire your first portal at the highest piston-supported point on the wall. Fire your next portal somewhere near you on the ground. Travel through.

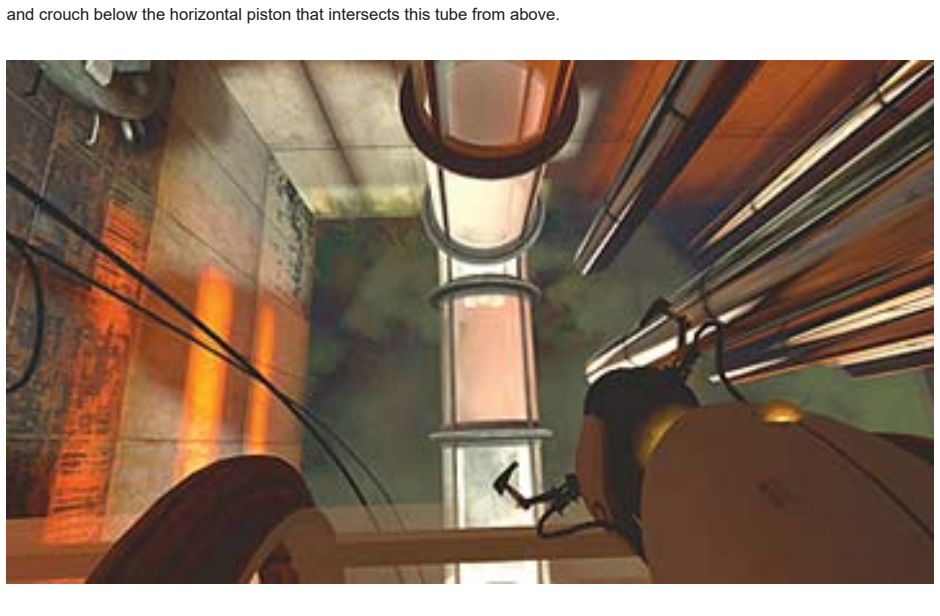


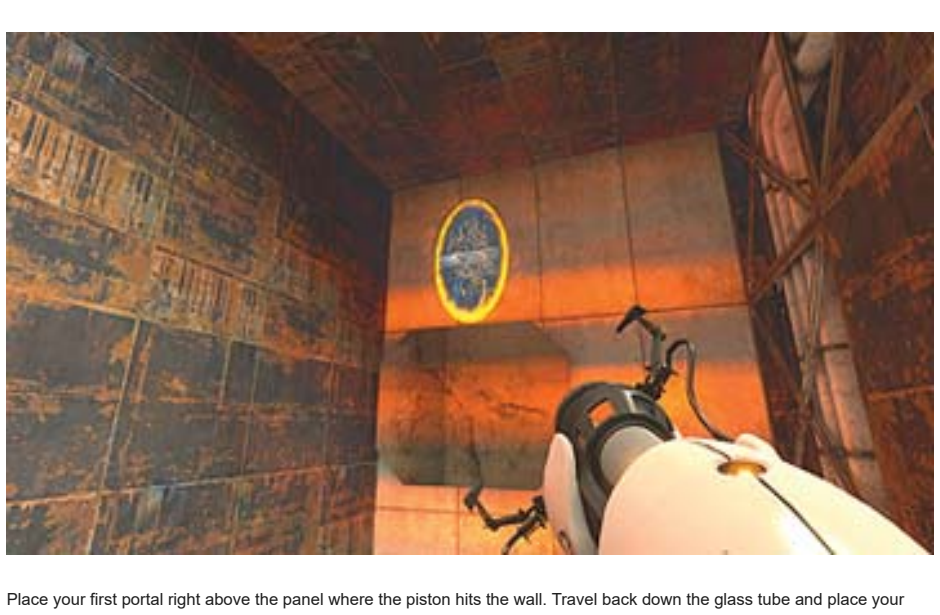


You are now able to reach the second-to-highest "layer" of pistons (the ones at the very top are too high to portal to). Replace your first portal someplace that would allow you to land on these pistons, and jump down to your second portal on the ground. Wait till the piston is fully extended before going through. Once you're on it, replace your first portal on the exposed ground before you. Work fast once you're on, though; when the piston fully retracts, you'll be back to square one.

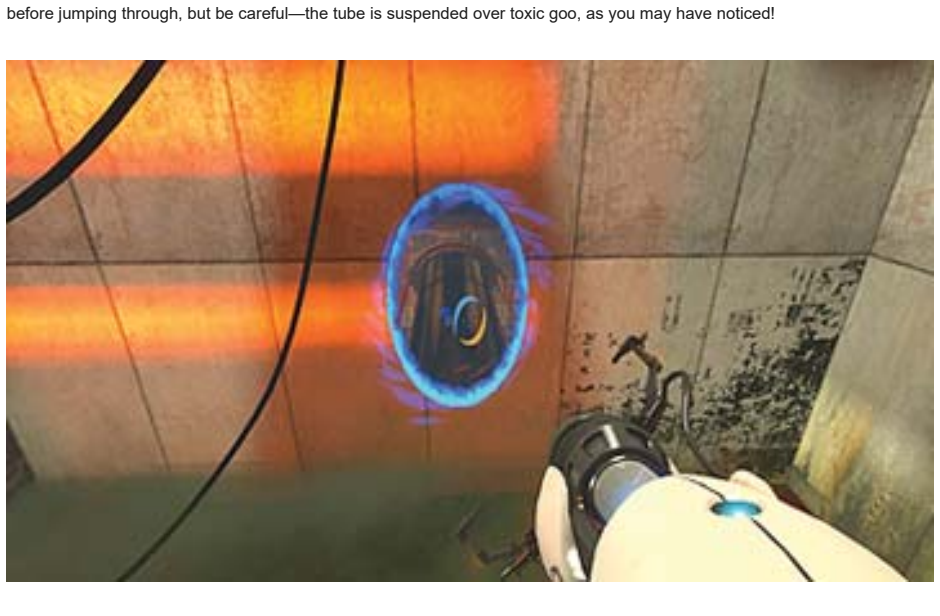


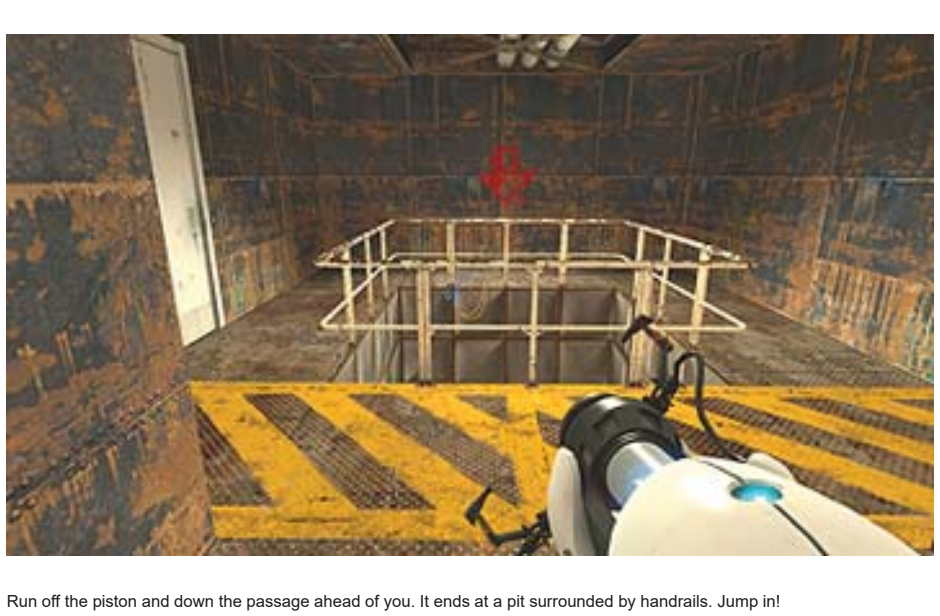
When you emerge from the ground, look for an alcove from which a vertical glass tube is visible. Run into it, drop down onto the connecting horizontal tube, and travel down till you can see yet another tube below you. Drop onto it, walk a few yards, and crouch below the horizontal piston that intersects this tube from above.



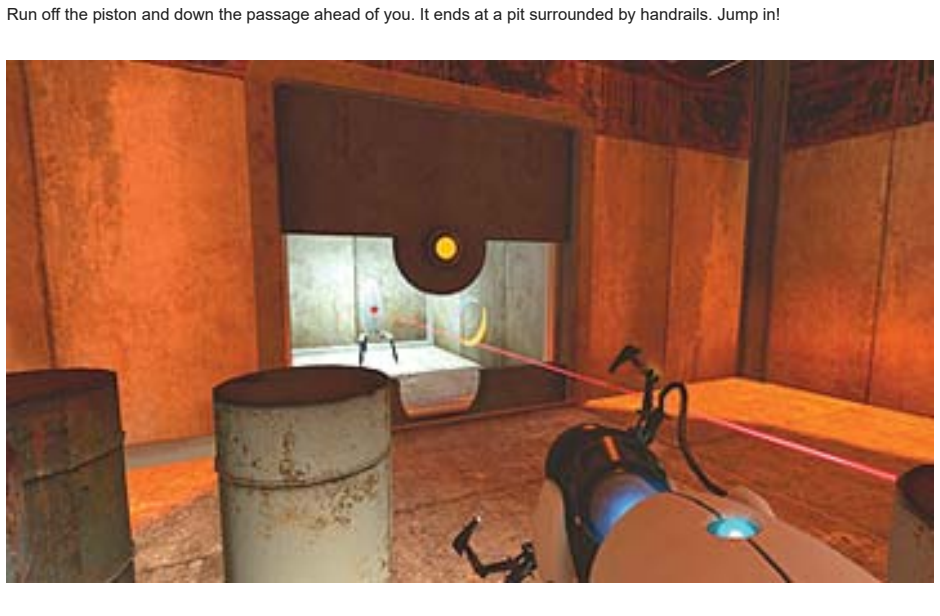


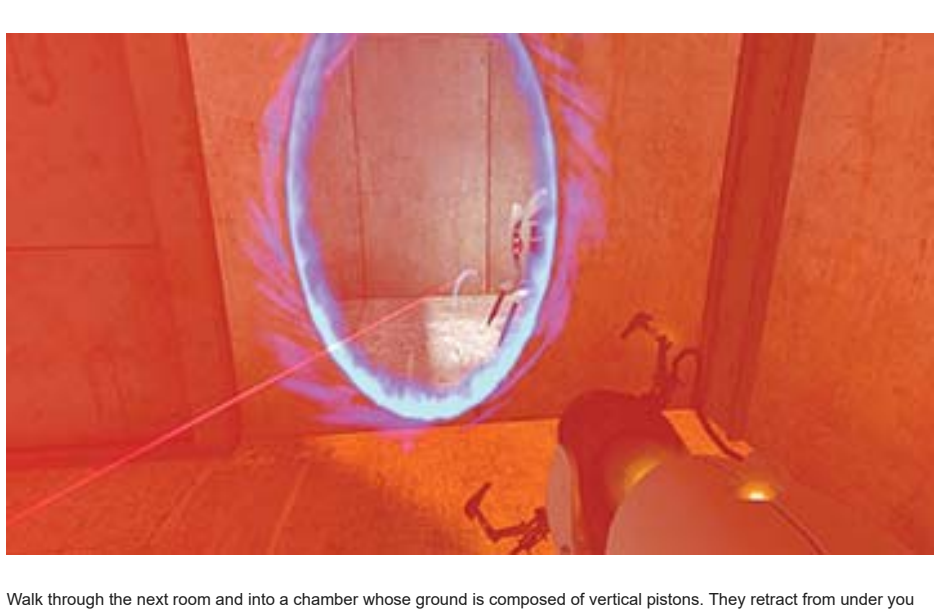
Place your first portal right above the panel where the piston hits the wall. Travel back down the glass tube and place your second portal just below you on the suitable wall, near where you dropped in. Wait till you can see the piston is fully extended before jumping through, but be careful—the tube is suspended over toxic goo, as you may have noticed!



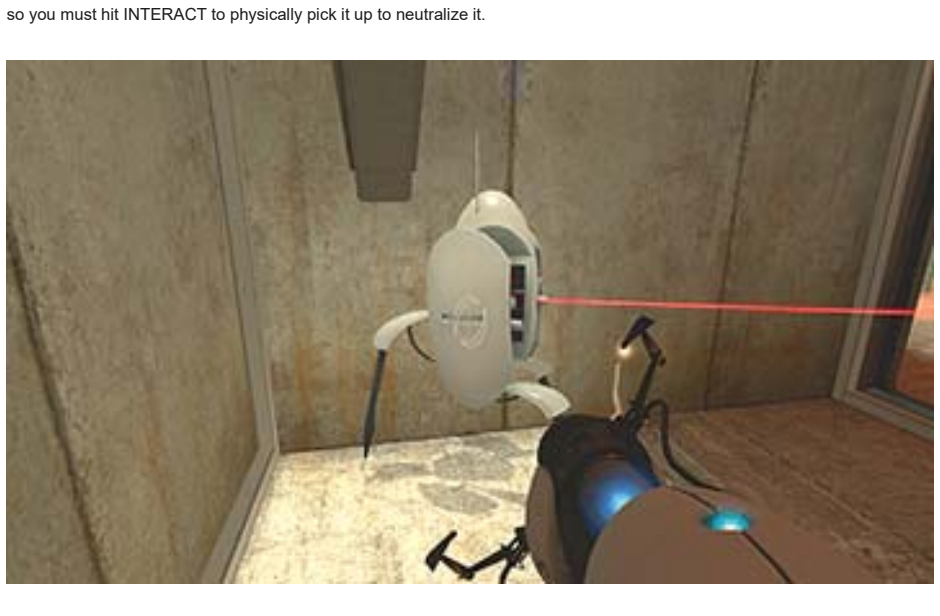


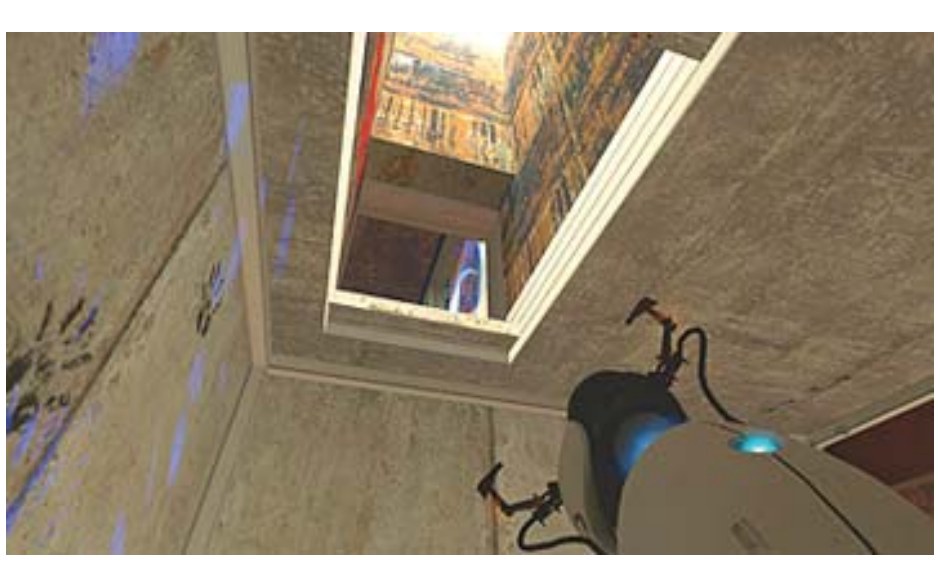
Run off the piston and down the passage ahead of you. It ends at a pit surrounded by handrails. Jump in!

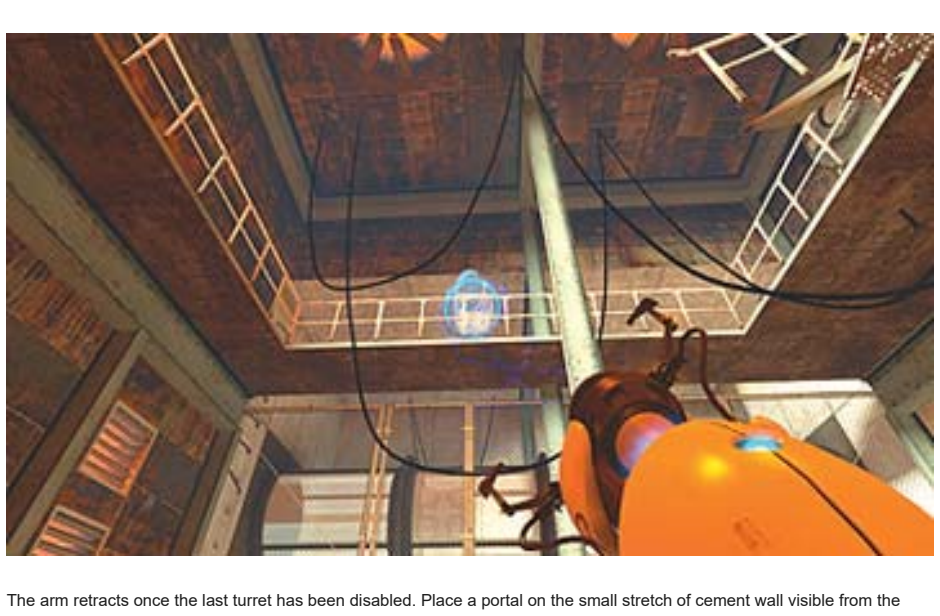




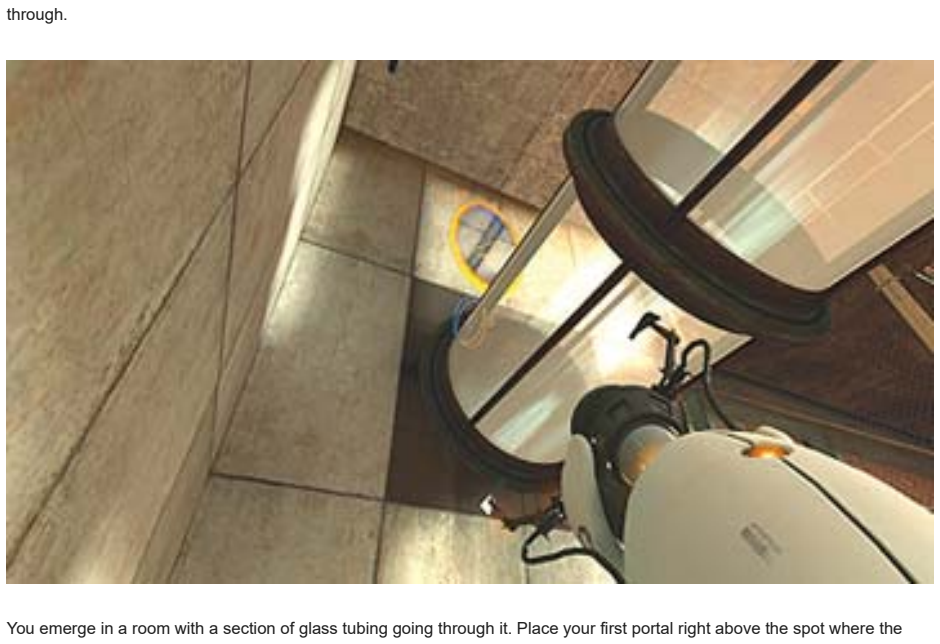
Walk through the next room and into a chamber whose ground is composed of vertical pistons. They retract from under you when you step on them, dumping you into a room with shut panels on all four walls. Momentarily, these will open one by one, revealing turrets stationed behind them. Prepare for the fray by placing your first portal on the wall nearest you. Once the first turret chamber opens, scramble to place your second portal behind it or to its flank, then run back into your first portal and tip the turret over. Repeat the process till all four turrets are disabled. The last one is held in place by a mechanical arm above it, so you must hit INTERACT to physically pick it up to neutralize it.



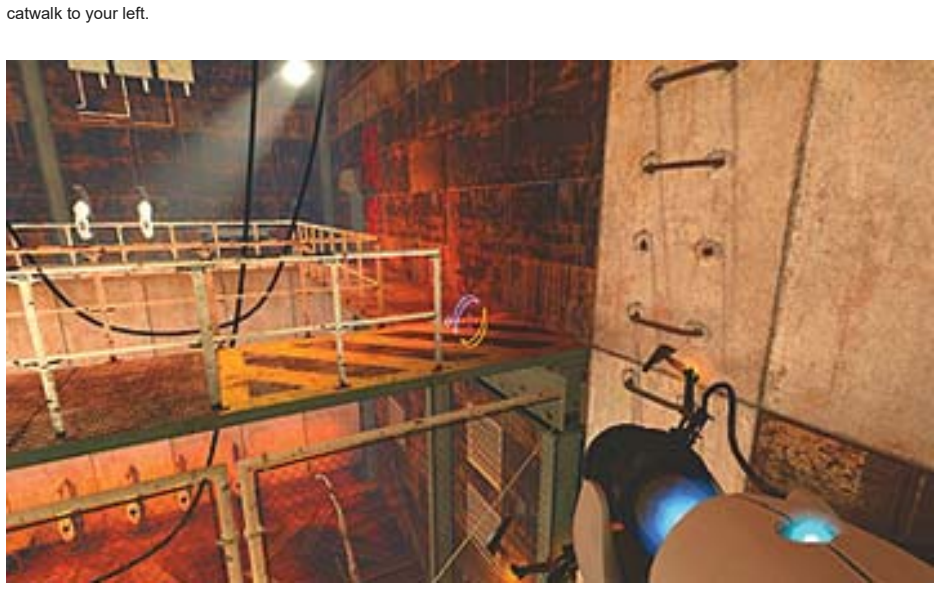


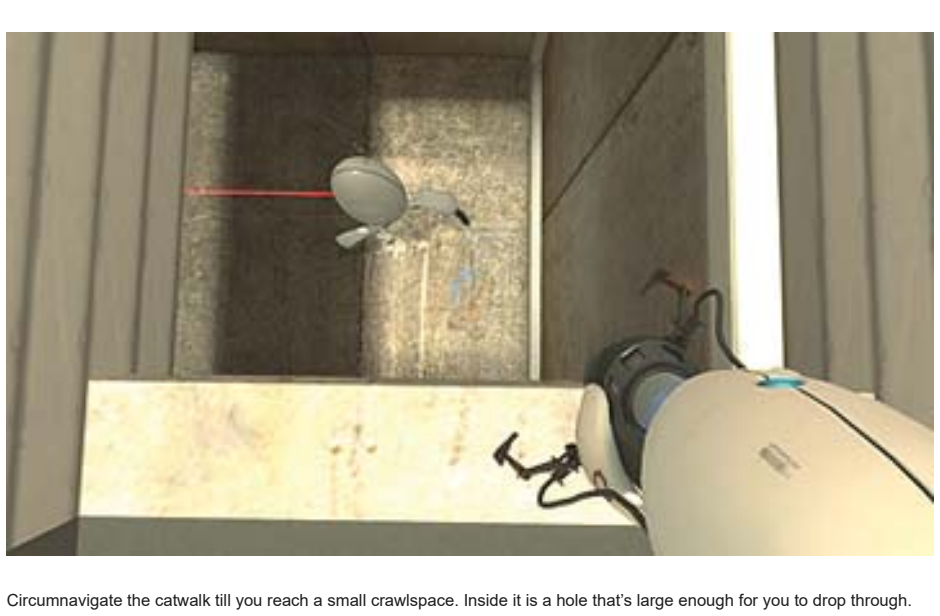


The arm retracts once the last turret has been disabled. Place a portal on the small stretch of cement wall visible from the turret alcove and travel through to it. You emerge in a room with a couple of turrets; don't worry, they're duds, despite the working laser sight one of them has. Ignore the turrets and place your first portal behind the catwalk above you. Travel through.

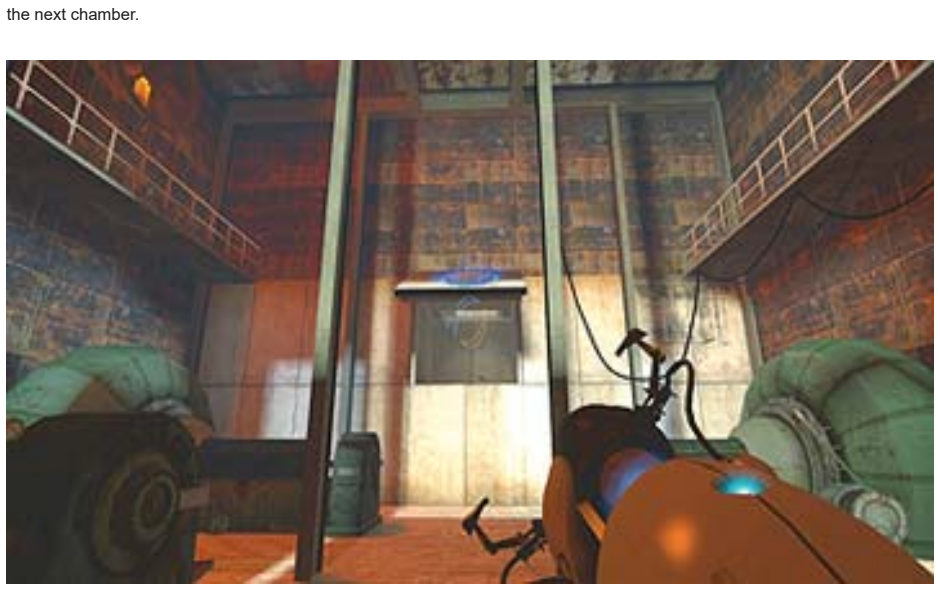


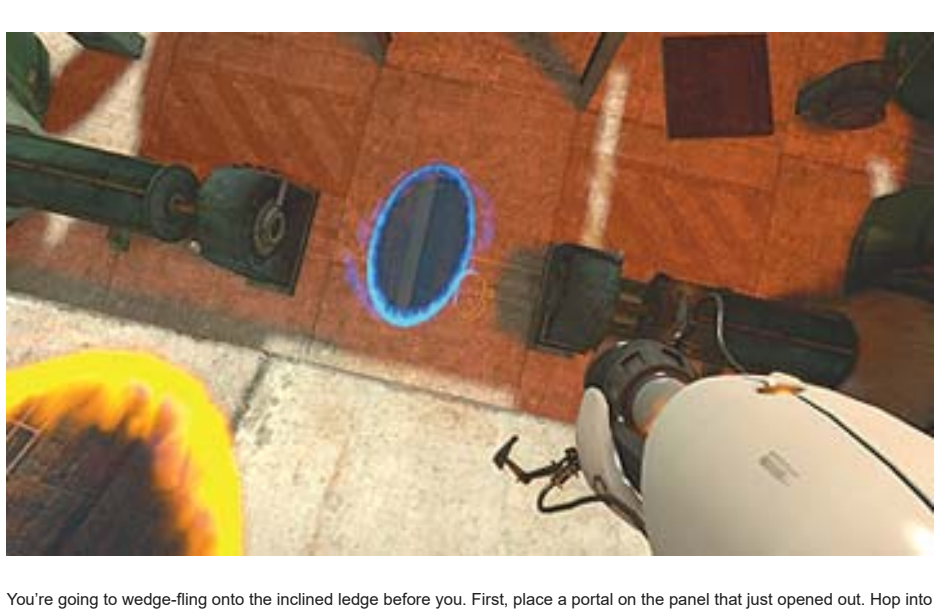
You emerge in a room with a section of glass tubing going through it. Place your first portal right above the spot where the tube meets the wall, and your second anywhere that's accessible. Run in and across the tube, then jump onto the marked catwalk to your left.



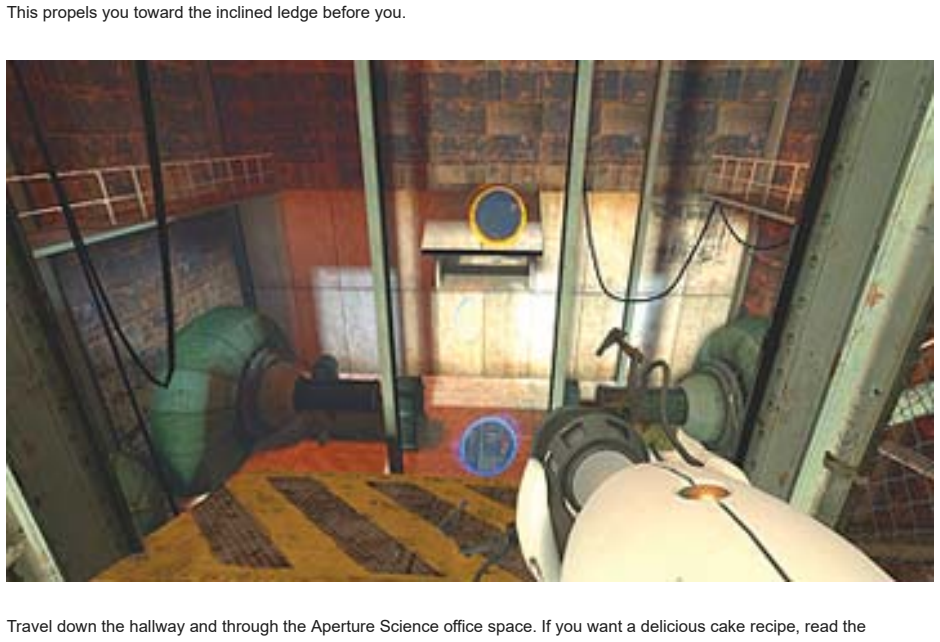


Circumnavigate the catwalk till you reach a small crawlspace. Inside it is a hole that's large enough for you to drop through. Doing so puts you right behind a turret. Tip the turret over, and the panel before you opens out, like a reverse-drawbridge into the next chamber.

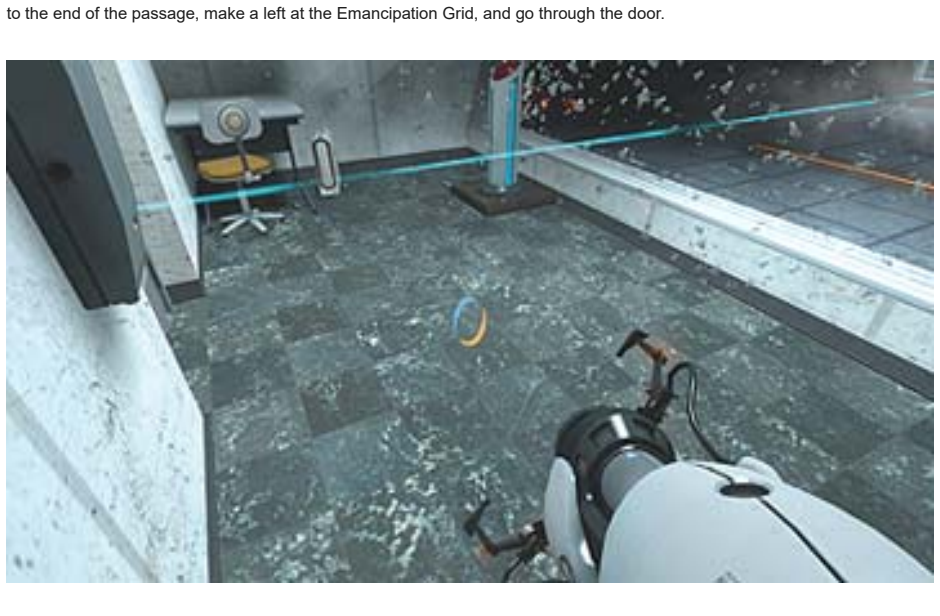


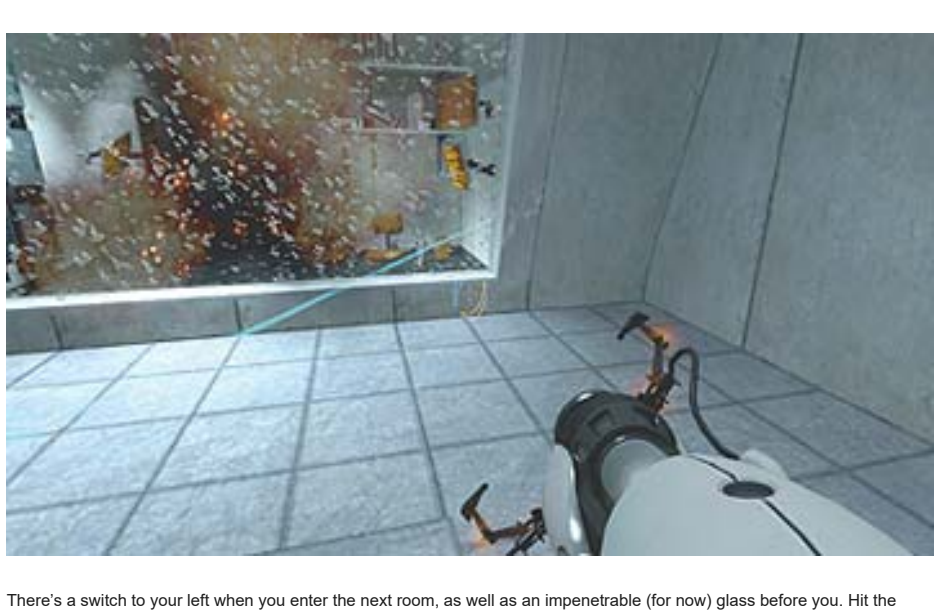


You're going to wedge-fling onto the inclined ledge before you. First, place a portal on the panel that just opened out. Hop into your second portal to get atop the panel. From atop the panel, replace your second portal on the ground and jump through. This propels you toward the inclined ledge before you.

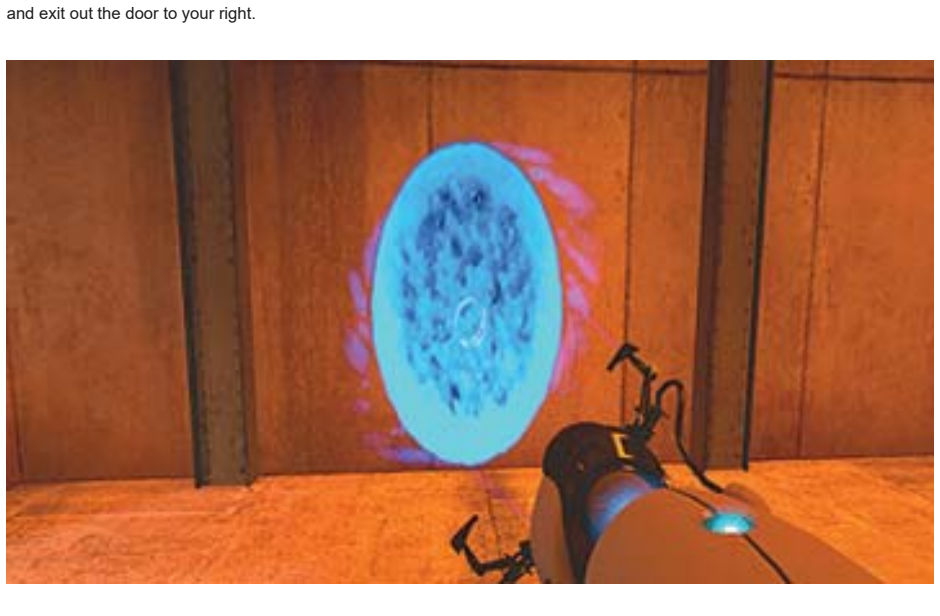


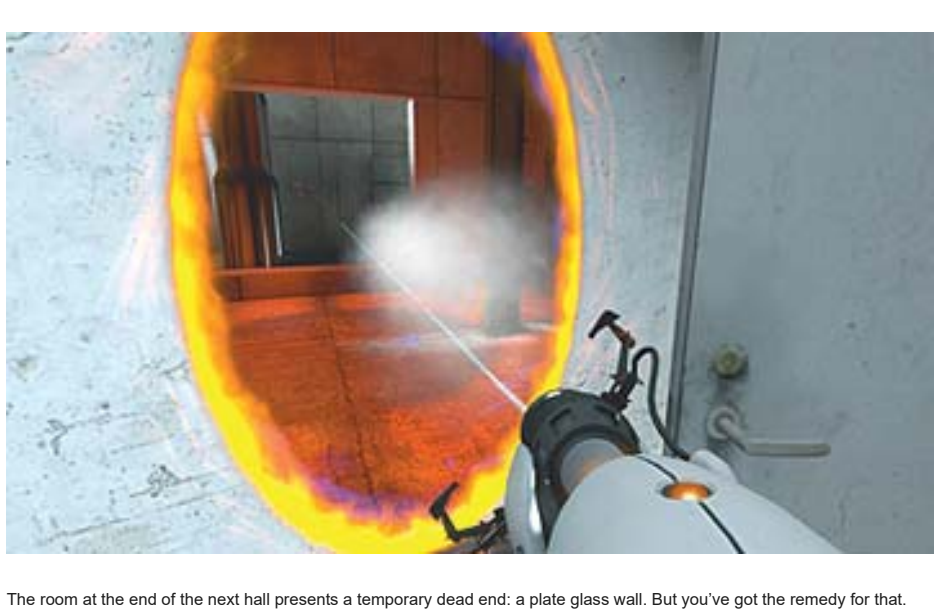
Travel down the hallway and through the Aperture Science office space. If you want a delicious cake recipe, read the information on the monitor that's behind the first door to your right. If you want to get straight to business, though, keep going to the end of the passage, make a left at the Emancipation Grid, and go through the door.



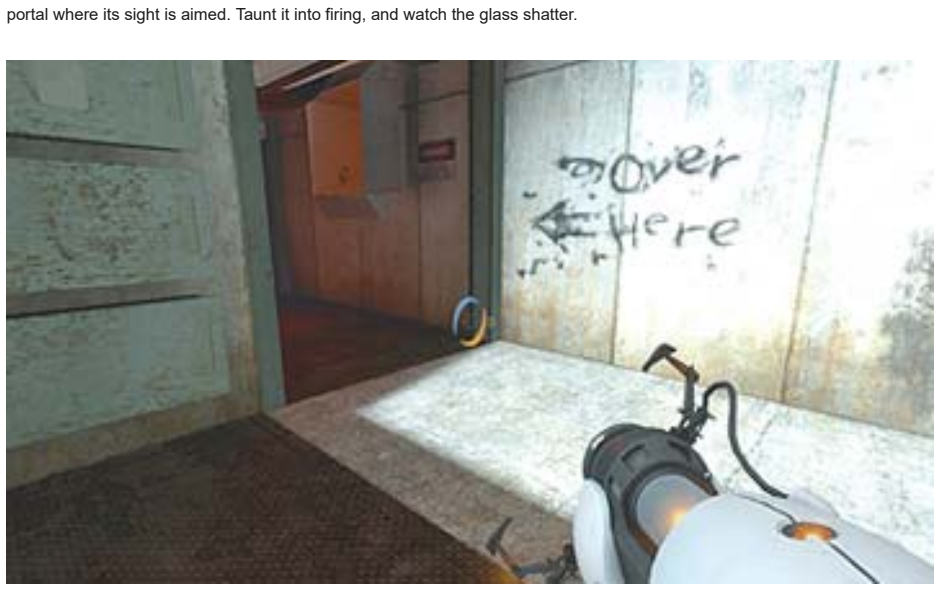


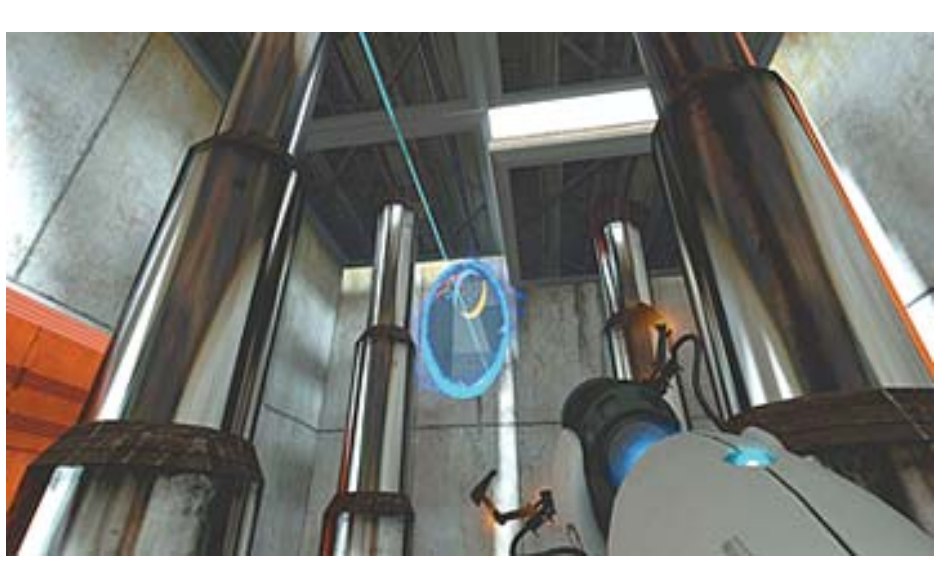
There's a switch to your left when you enter the next room, as well as an impenetrable (for now) glass before you. Hit the switch. This summons the Rocket Turret from the inactive pod behind the glass before you. When it wakes up, let it set its sights on you. When it beeps, know that a rocket is incoming, so strafe away. The rocket has shattered the glass. Hop into the Turret's side of the room, and repeat the process for the second glass. When your way is clear, dash through the room and exit out the door to your right.

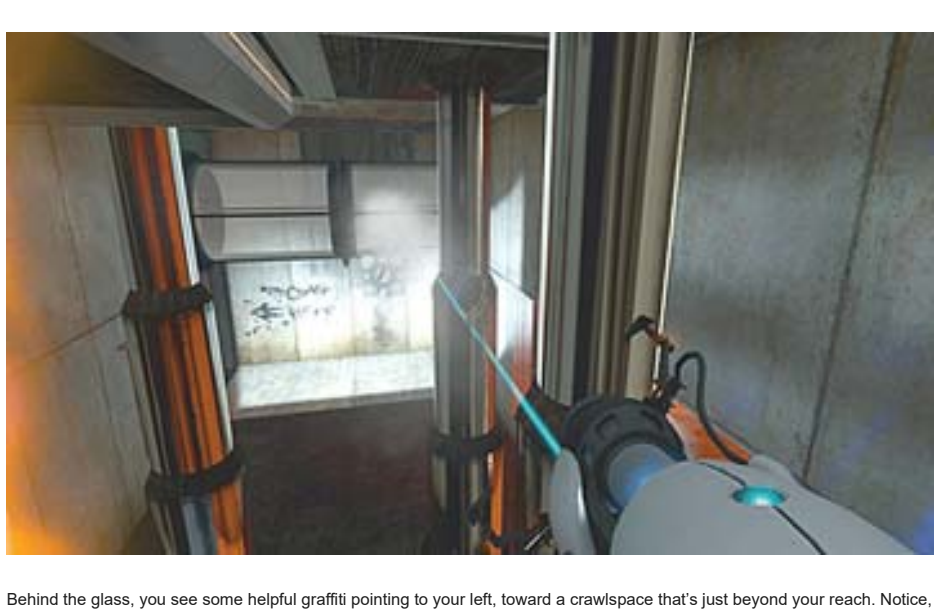




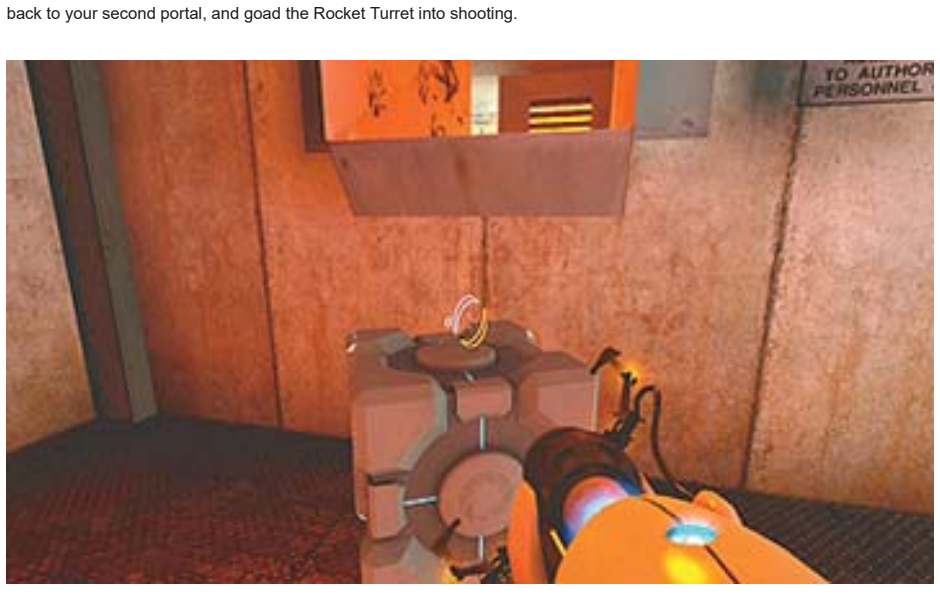
The room at the end of the next hall presents a temporary dead end: a plate glass wall. But you've got the remedy for that. Place your first portal on the wall opposite the glass. Next, run back into the Rocket Turret's room, and place your second portal where its sight is aimed. Taunt it into firing, and watch the glass shatter.

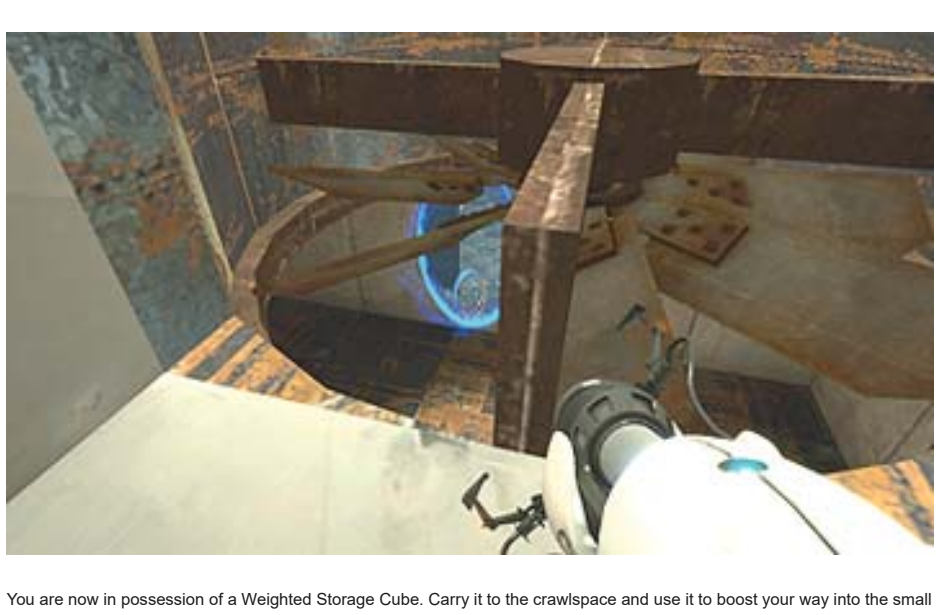




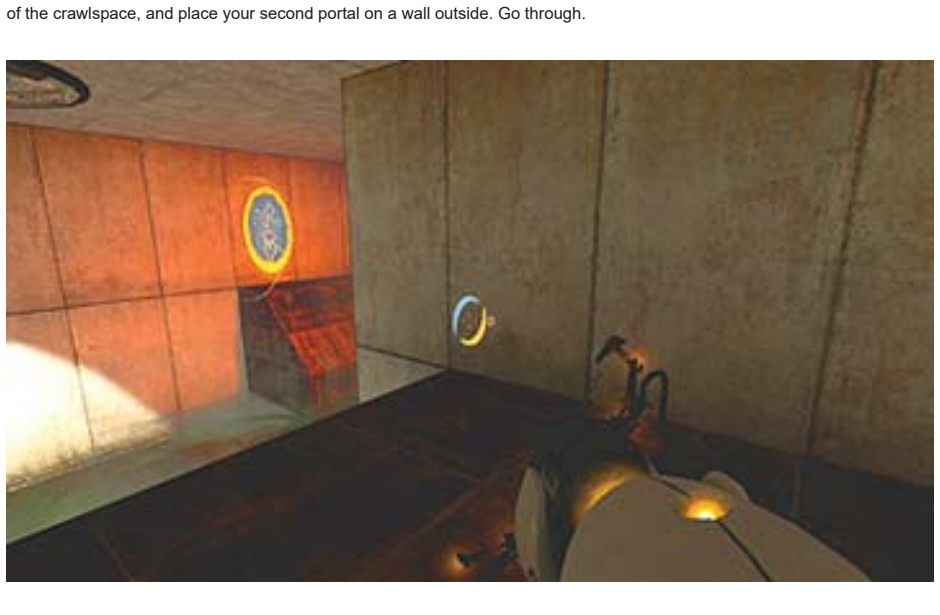


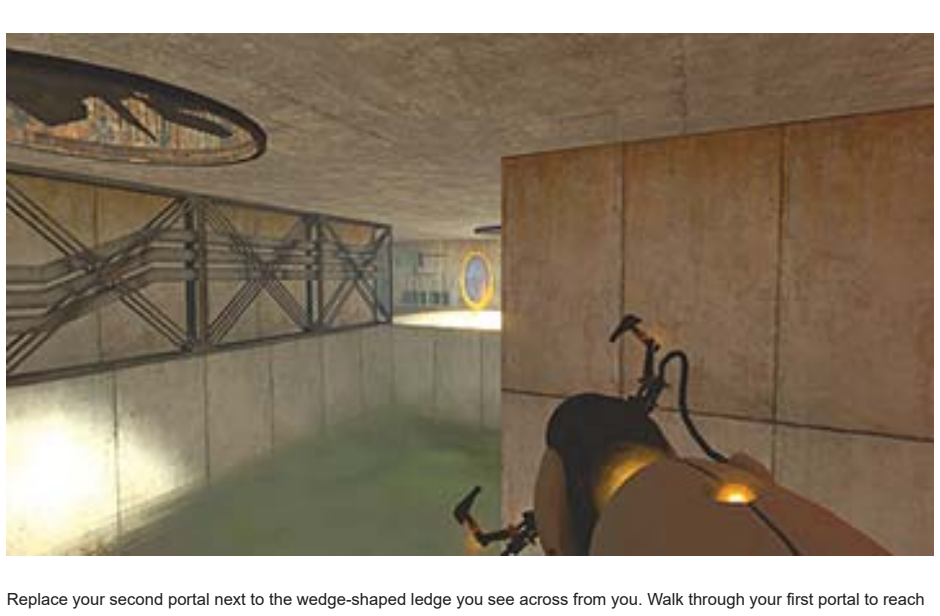
Behind the glass, you see some helpful graffiti pointing to your left, toward a crawlspace that's just beyond your reach. Notice, though, that traveling through the glass tube above you is nothing other than a Weighted Storage Cube. You have to liberate it, and you have the means to do so. Replace your first portal behind the piston nearest the wall, opposite the glass tube. Run back to your second portal, and goad the Rocket Turret into shooting.



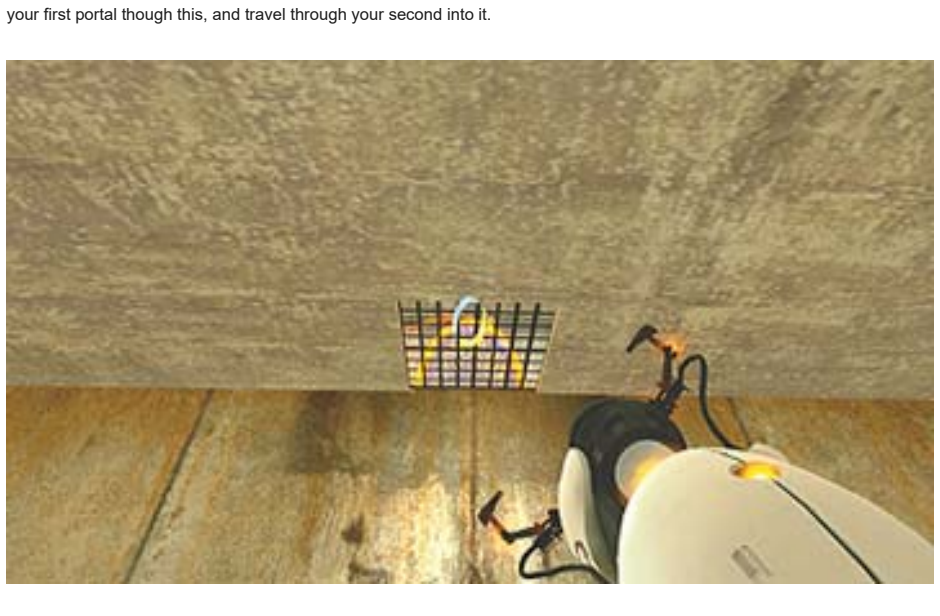


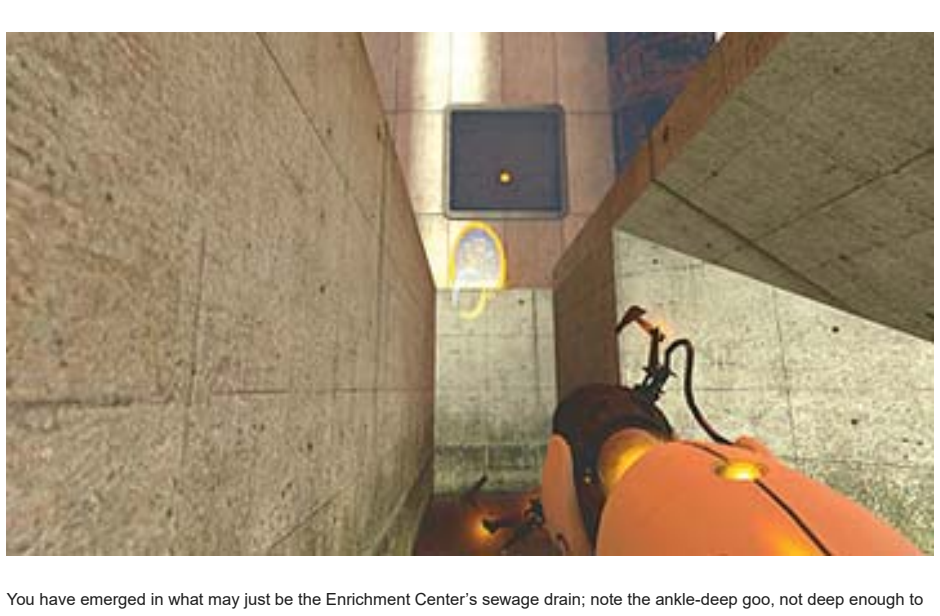
You are now in possession of a Weighted Storage Cube. Carry it to the crawlspace and use it to boost your way into the small gap. At the end of the ventilation shaft you've just entered, you see a fan. Aim your first portal between its blades. Travel out of the crawlspace, and place your second portal on a wall outside. Go through.





Replace your second portal next to the wedge-shaped ledge you see across from you. Walk through your first portal to reach it. Aim a portal at the wall on the far end of the chamber, to your right when you reach the end of this ledge, and travel to it. Turn right after emerging and move to the wall. A faded arrow points upward toward a tiny mesh grate on the low ceiling. Aim your first portal though this, and travel through your second into it.

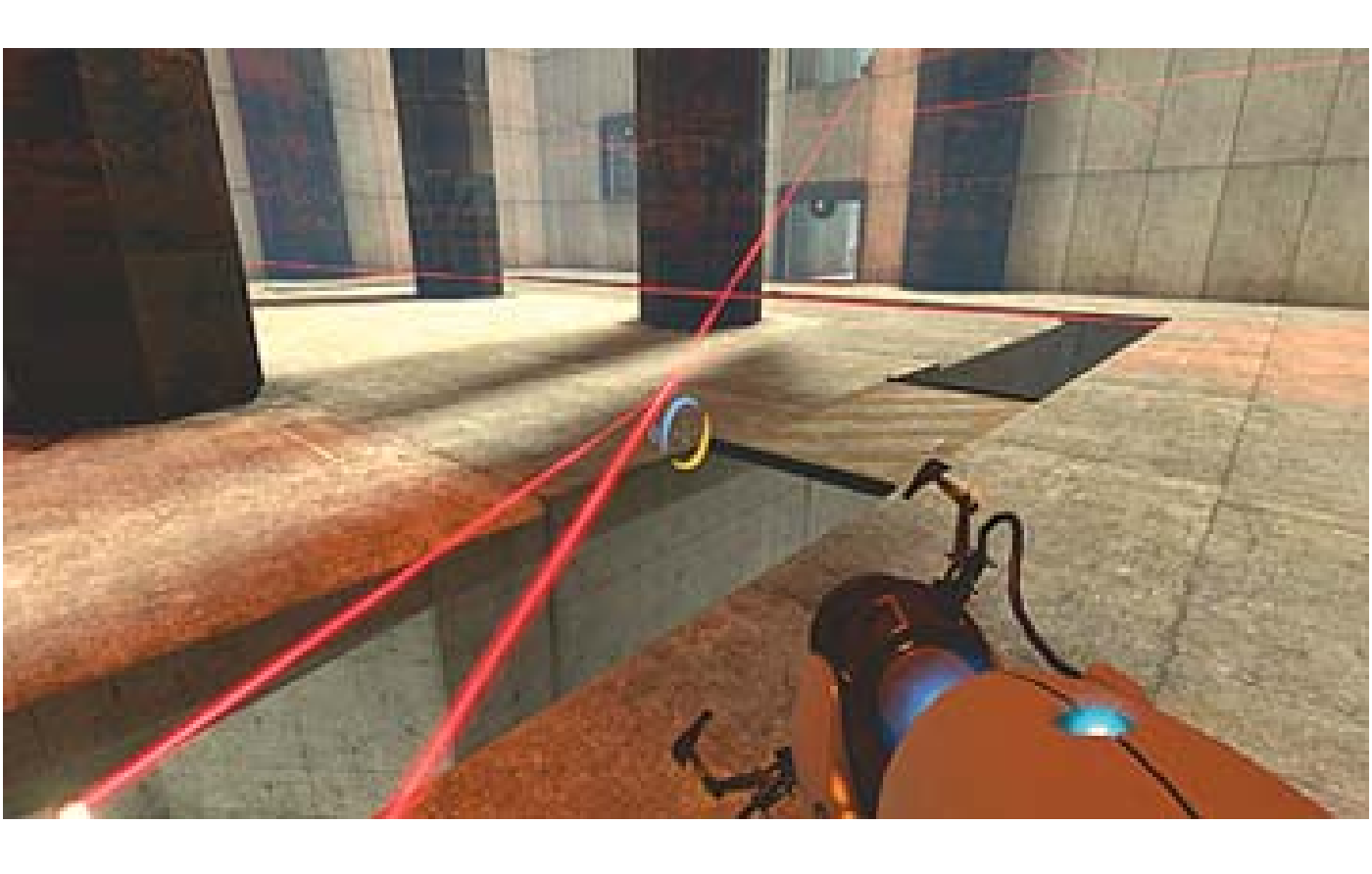




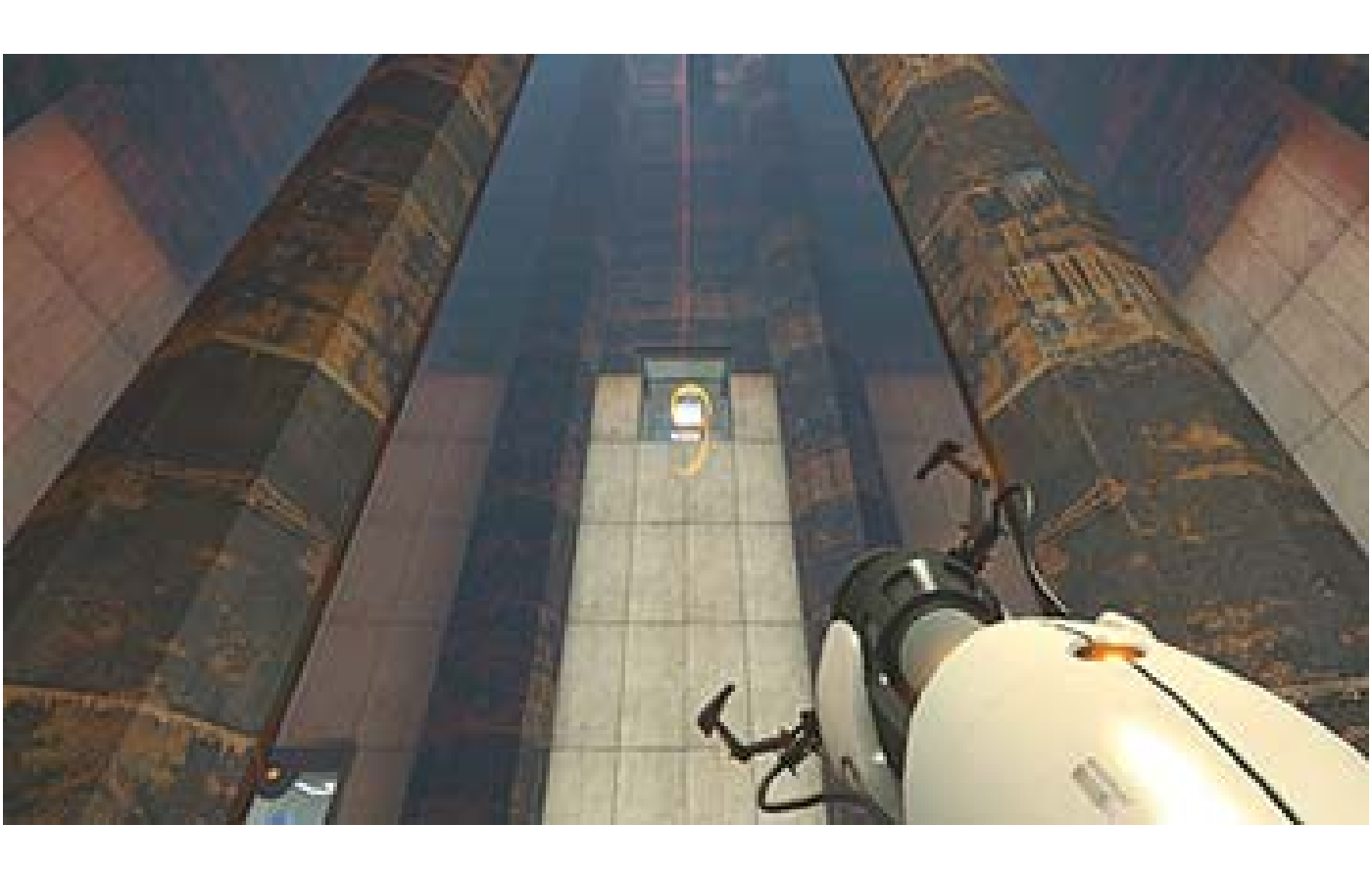
You have emerged in what may just be the Enrichment Center's sewage drain; note the ankle-deep goo, not deep enough to be lethal, but certainly sufficient to make you feel gross. Place your first anywhere on the level above you, and run through your second. Prepare yourself for an ambush of epic proportions.

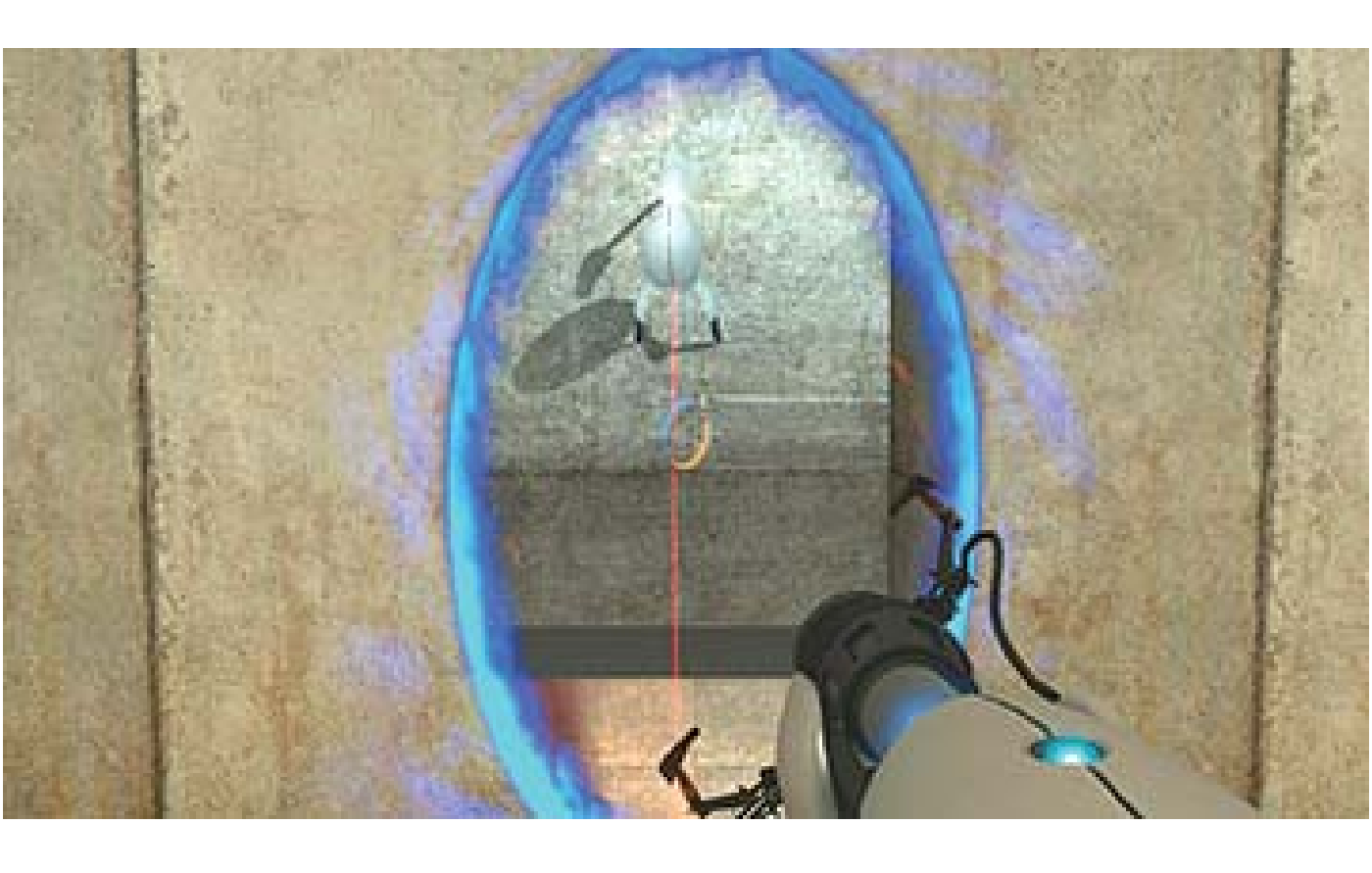
The Escape

Part Three

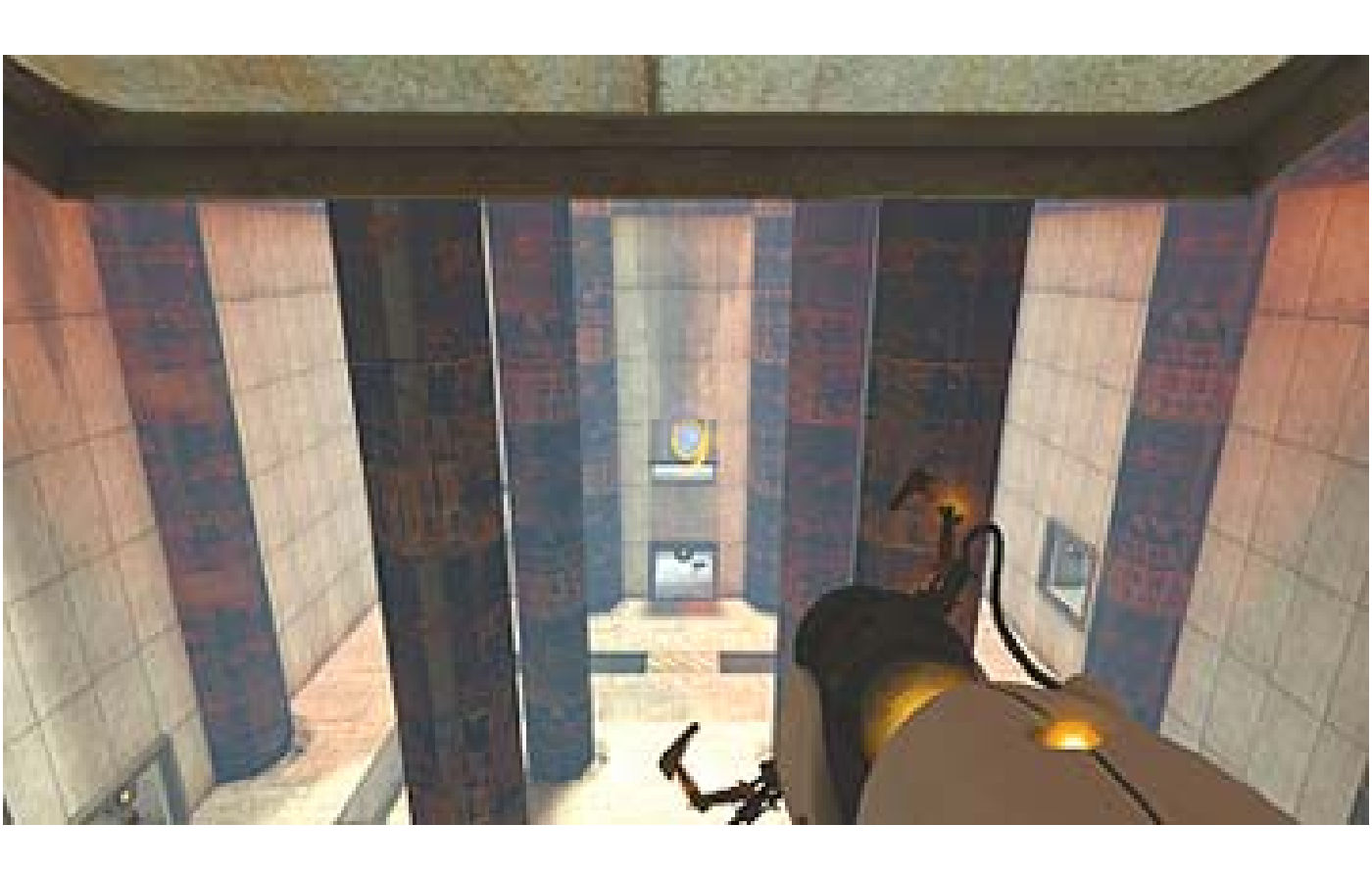


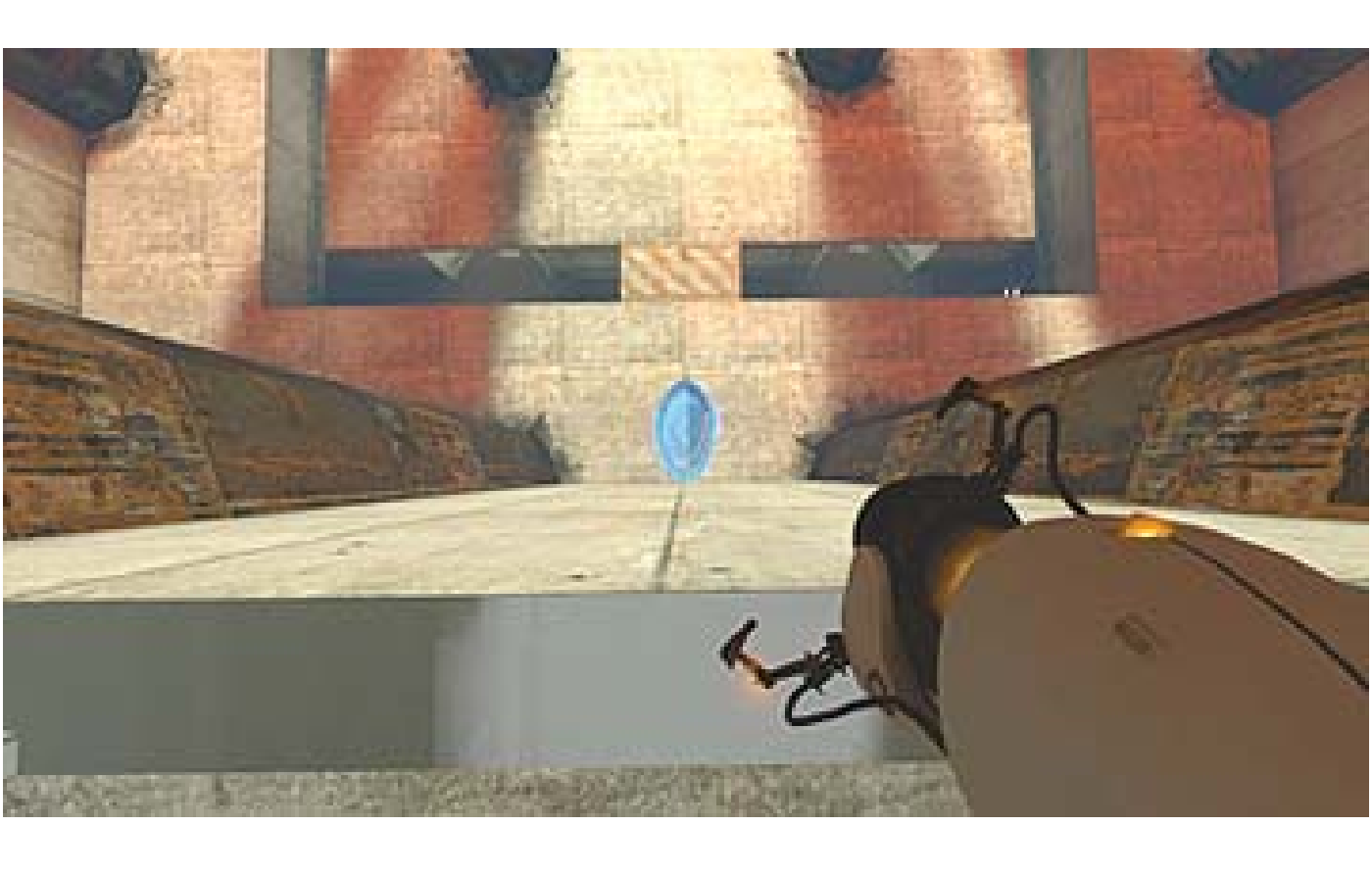
The moment you set foot on the top level of this enormous chamber, you know that something is amiss. From all sides, shut panels open to reveal a multitude of stationary turrets hidden behind them. If you don't take cover soon, you're going to be filled with holes. Retreat to the nearest corner and gather your wits. Lucky for you, the situation isn't as bad as it seems. You're only in danger at first, when they take you by surprise. Simply take them out one by one. It's a cakewalk.



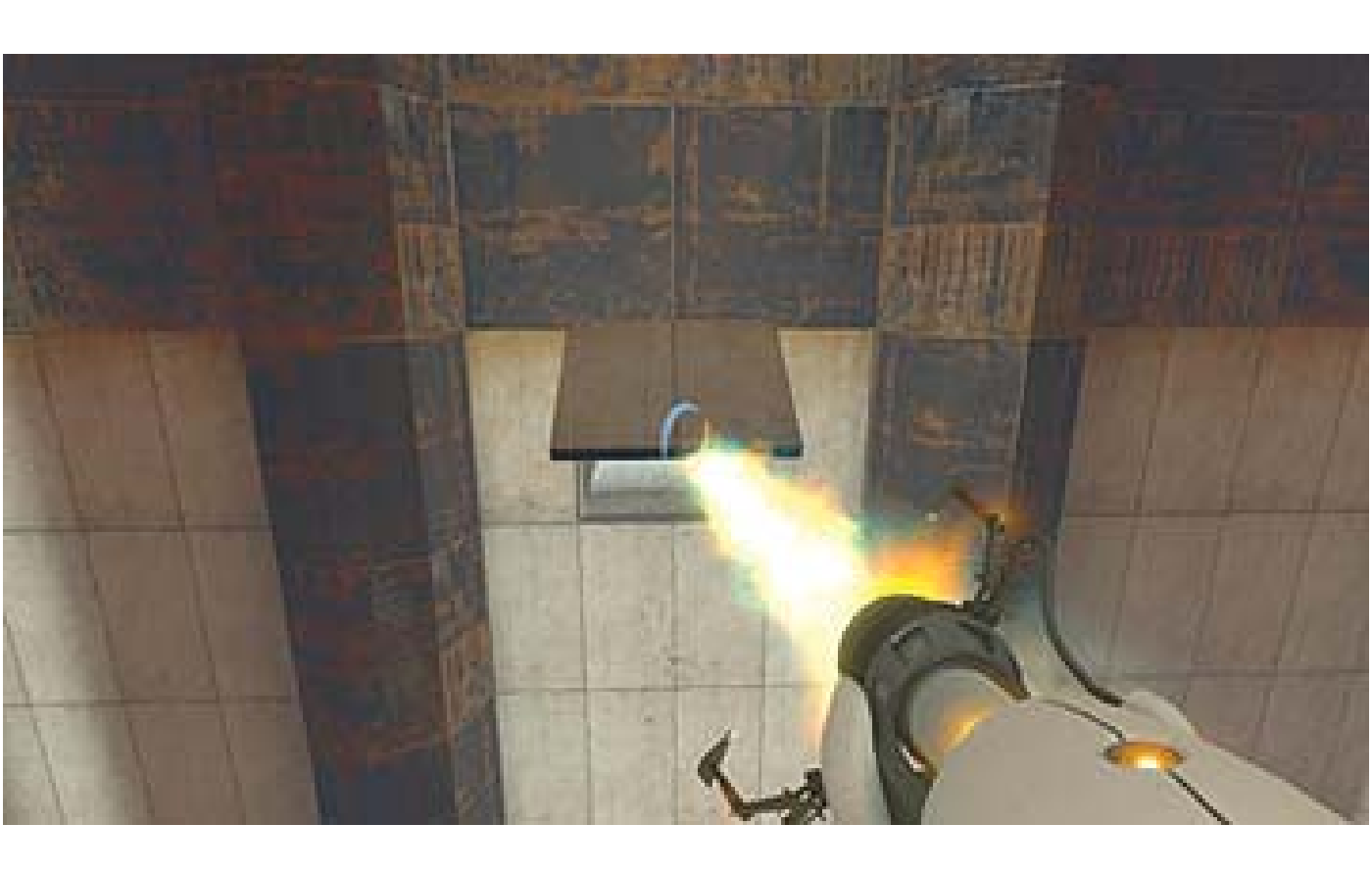


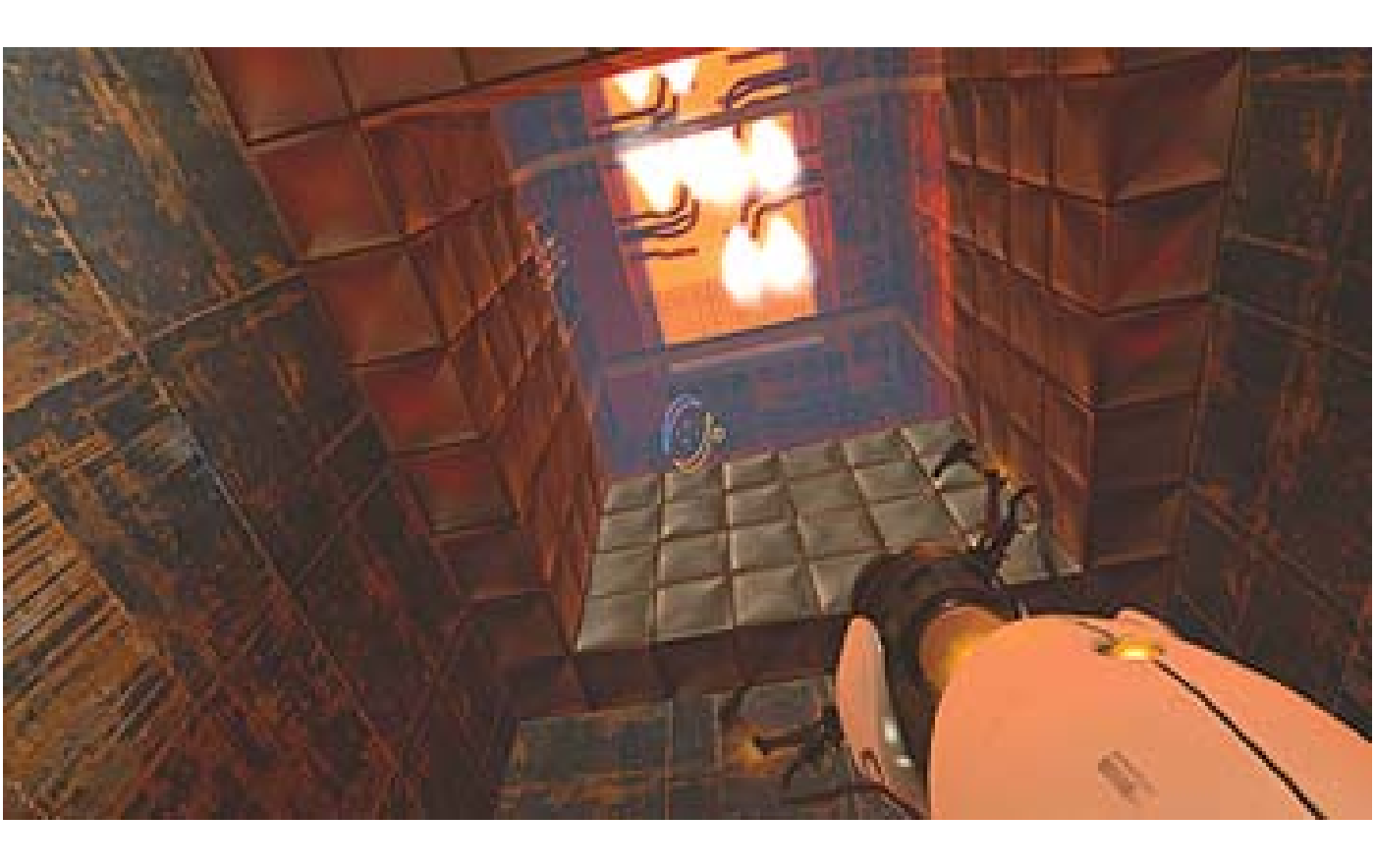
The last one you take out will most likely be the highest one. This is perfect: You need to get up to that room anyway. Simply place your first portal above its head, and your second anywhere near it. Drop in and say goodbye.

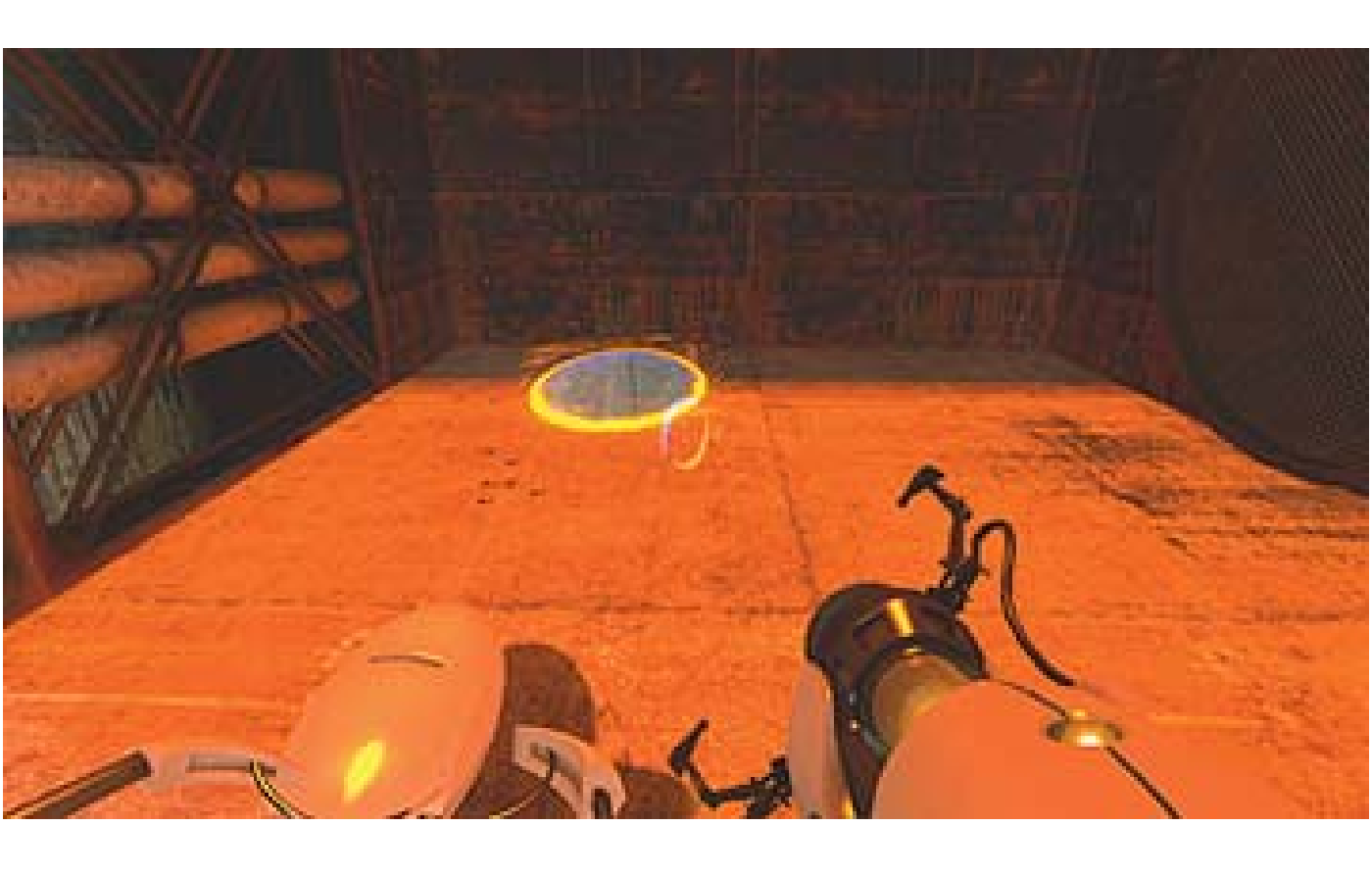




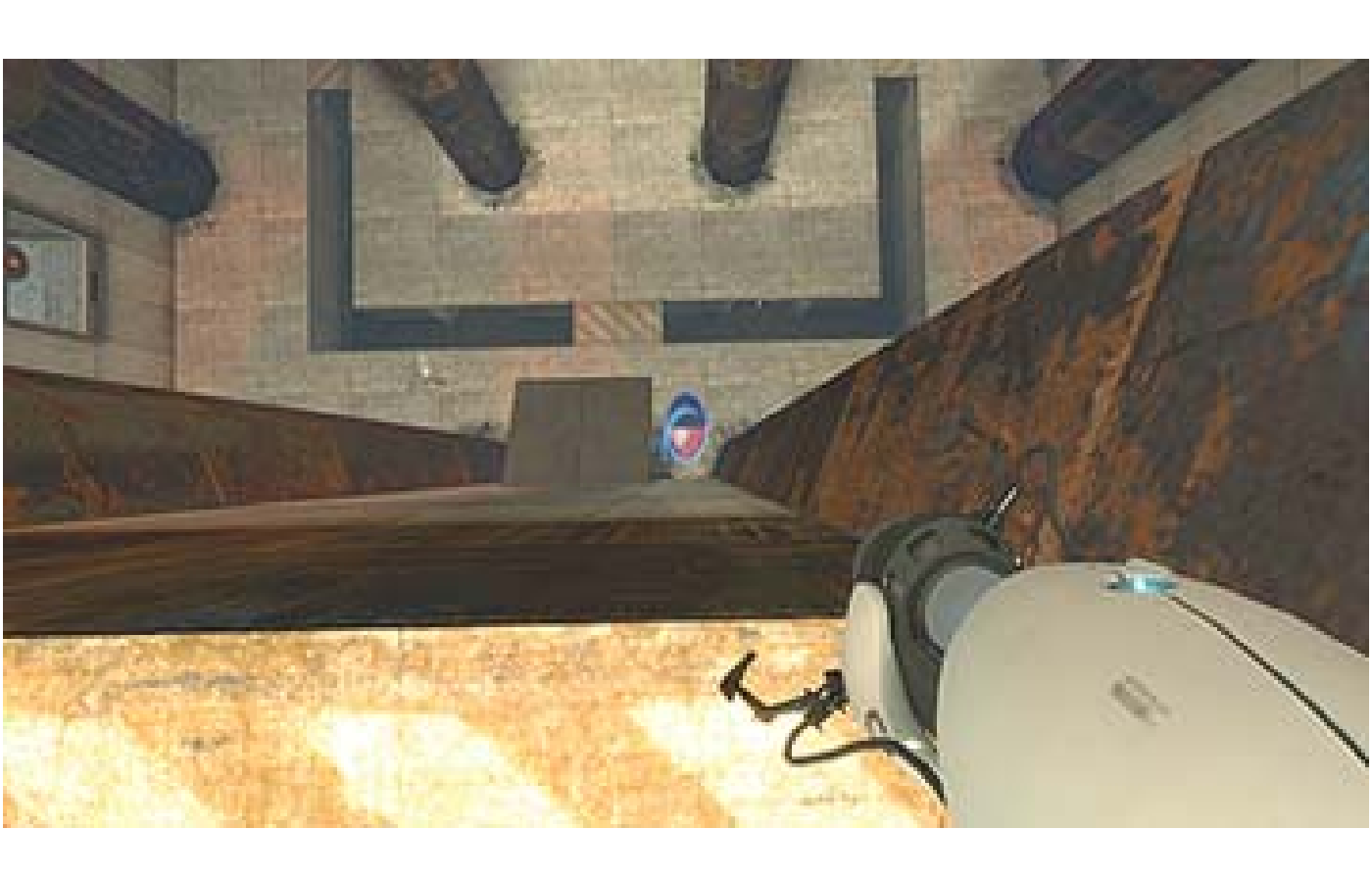
When you face out of that room, you're directly in front of a downward-sloping panel. Place your first portal here, and your second straight down on the ground beneath you. Jump in. As you travel out of your first portal, you have a direct shot at another downward-sloping panel—the one right above the alcove you were just in, in fact. Replace your first portal here, right as you're about to collide with it. This double Wedge Fling will propel you way up where you need to go.

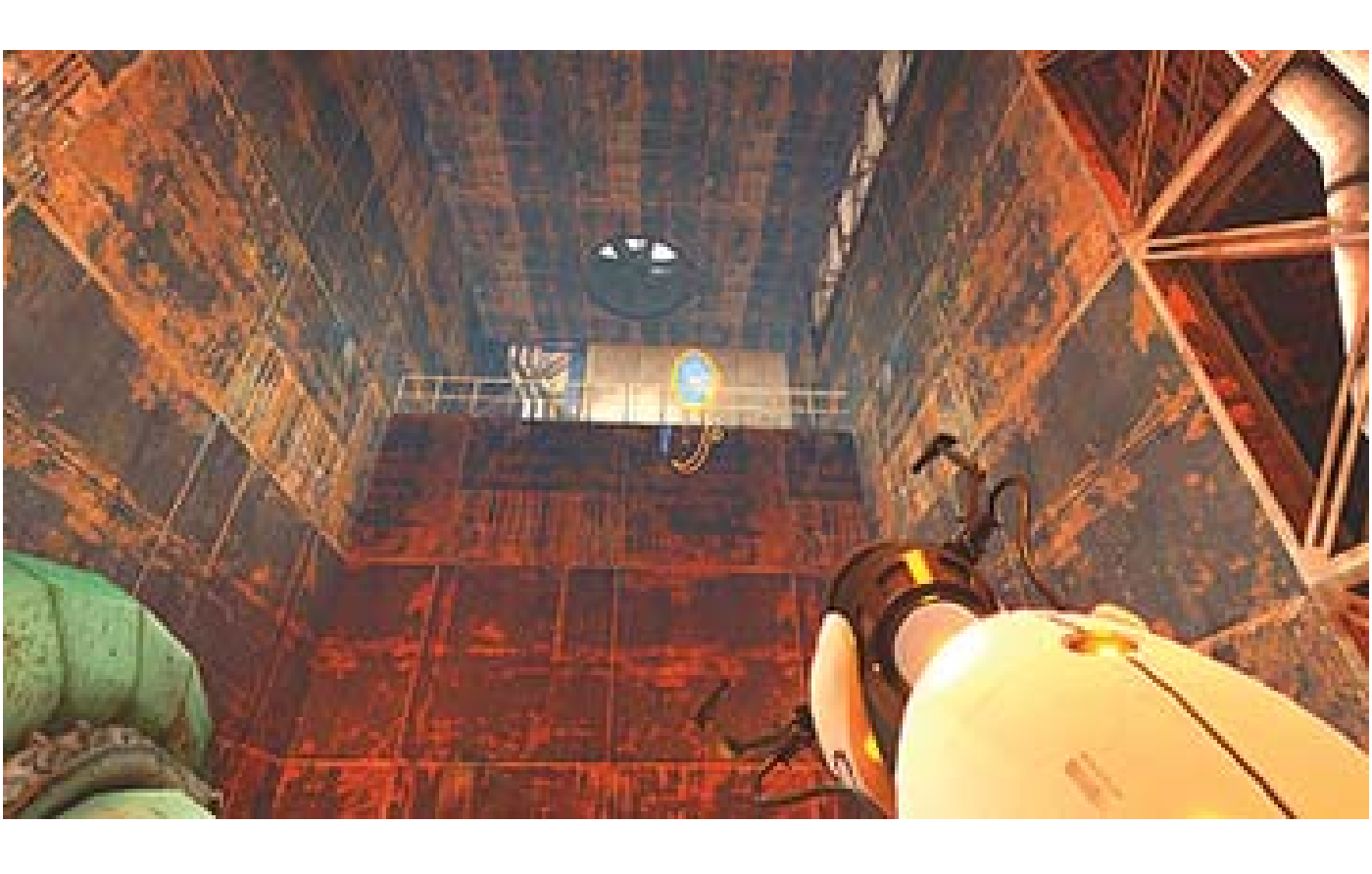




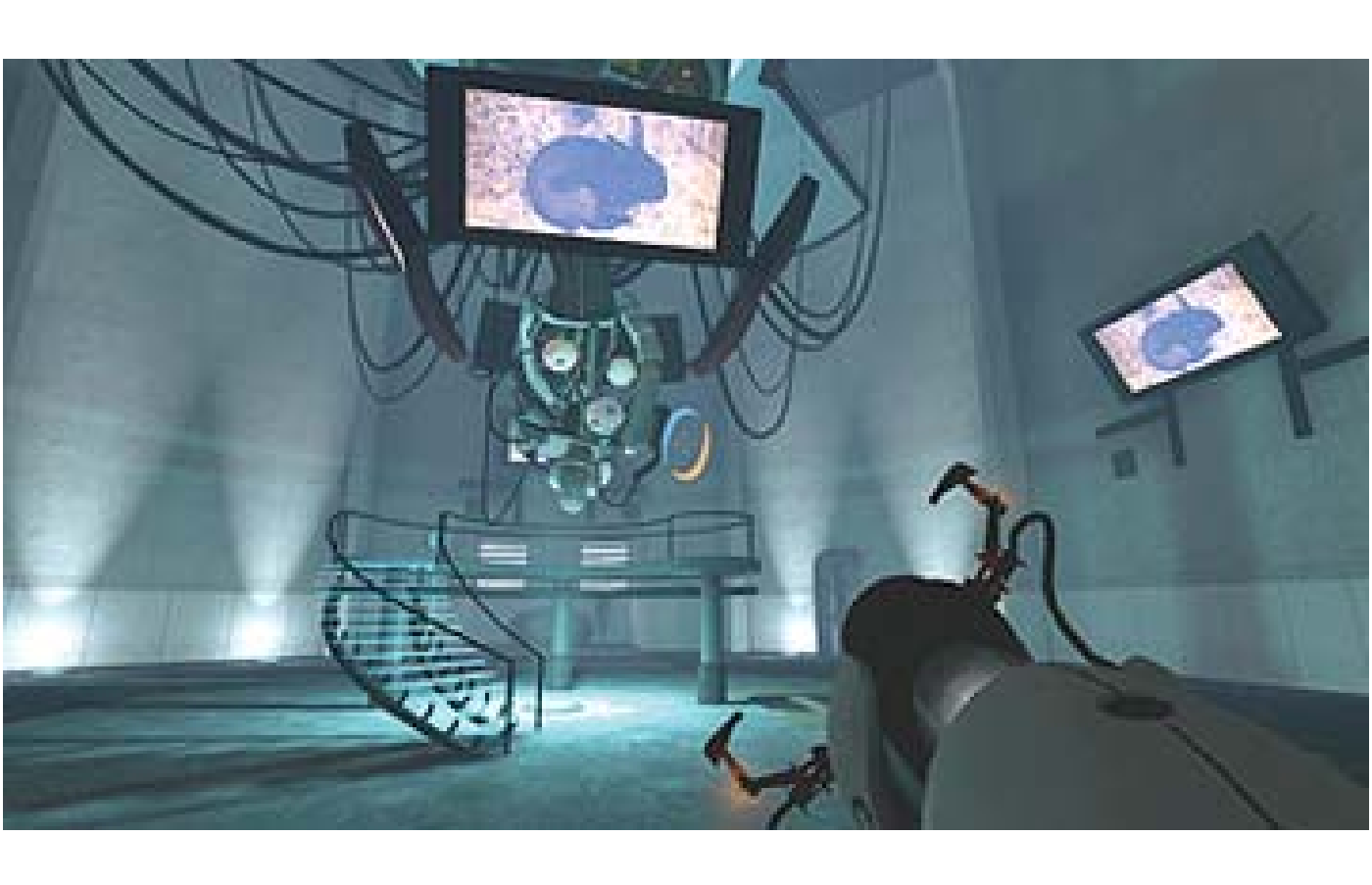


You're now in a room that is way above the turret chamber. When you reach the back of this room, a pair of mechanical arms deploy two turrets directly before you. Run back behind some cover and place portals beneath their legs to foil them. Once they're disabled, place your first portal on the ground behind where they stood. Place your second way down on the ground level, where the turrets ambushed you. This insane Floor-to-Floor jump jettisons you to the room above the one you're in. Finally, place a portal behind the handrail you see high up ahead of you, and travel to it. You're about to have a nice, long talk with GLaDOS.

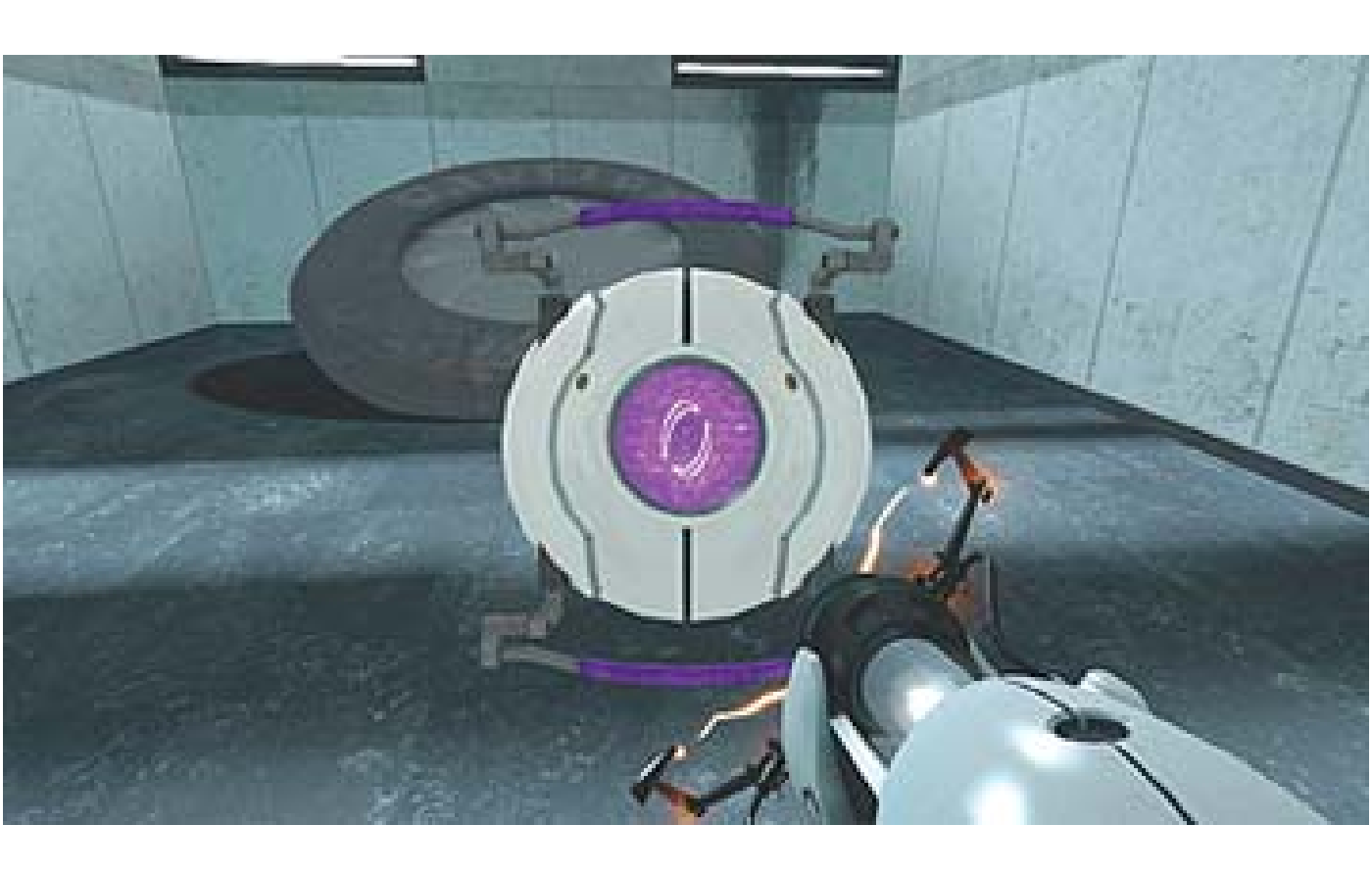


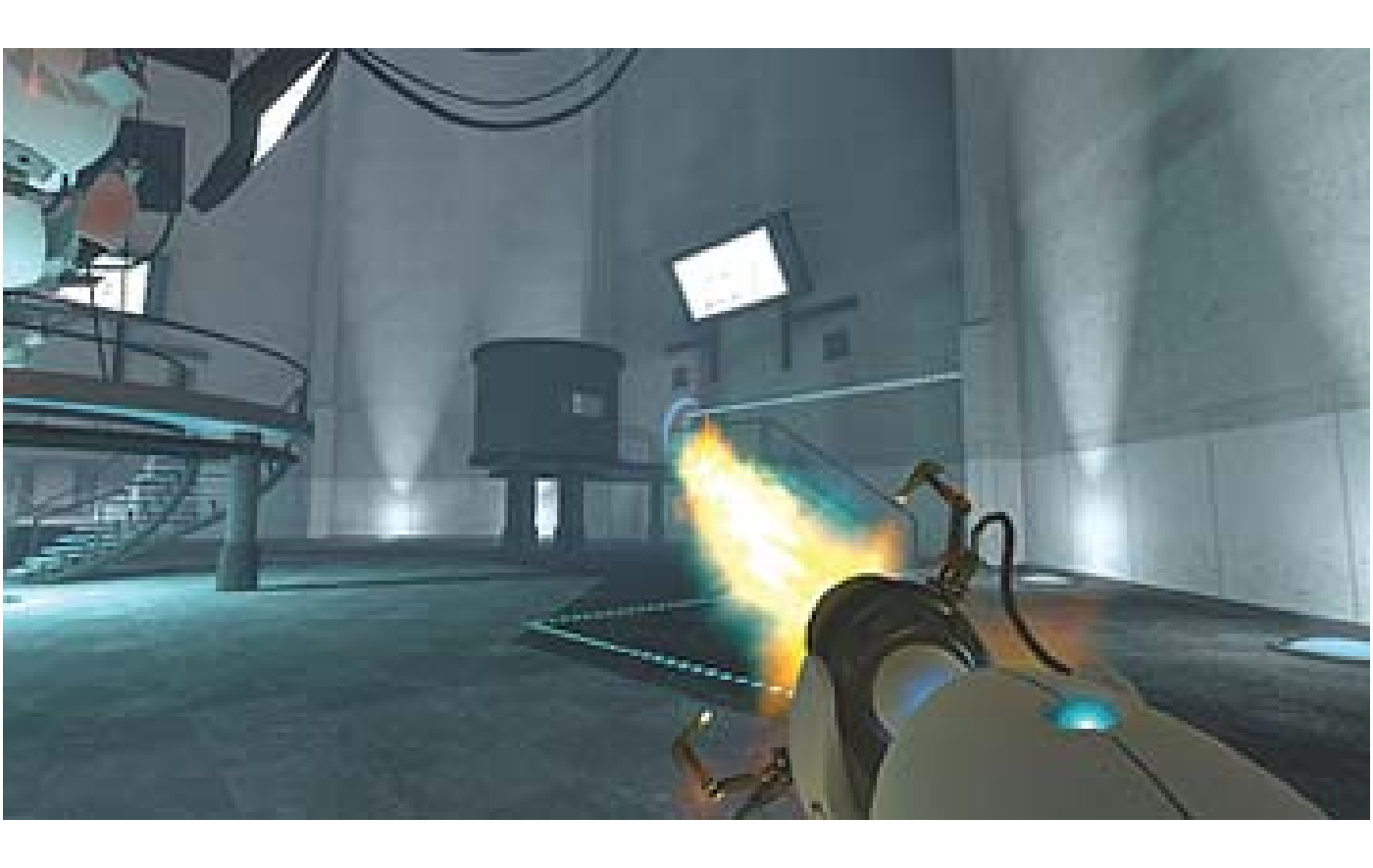


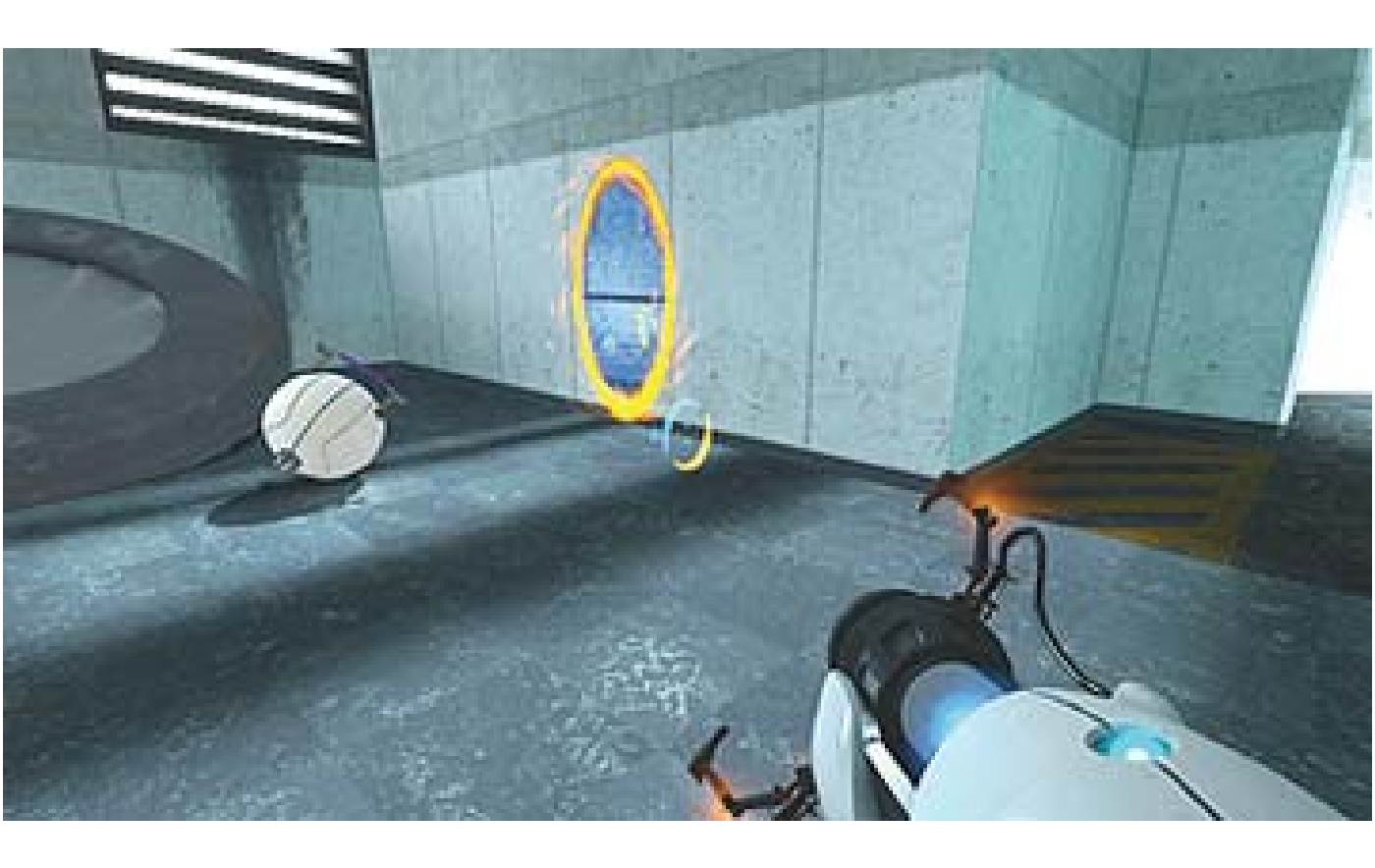
A series of long hallways and narrow catwalks leads you to your ultimate destination: GLaDOS's nest. She resides in the center of a circular room with an incinerator directly behind her, and the switch that activates it housed in an emplacement to her left.

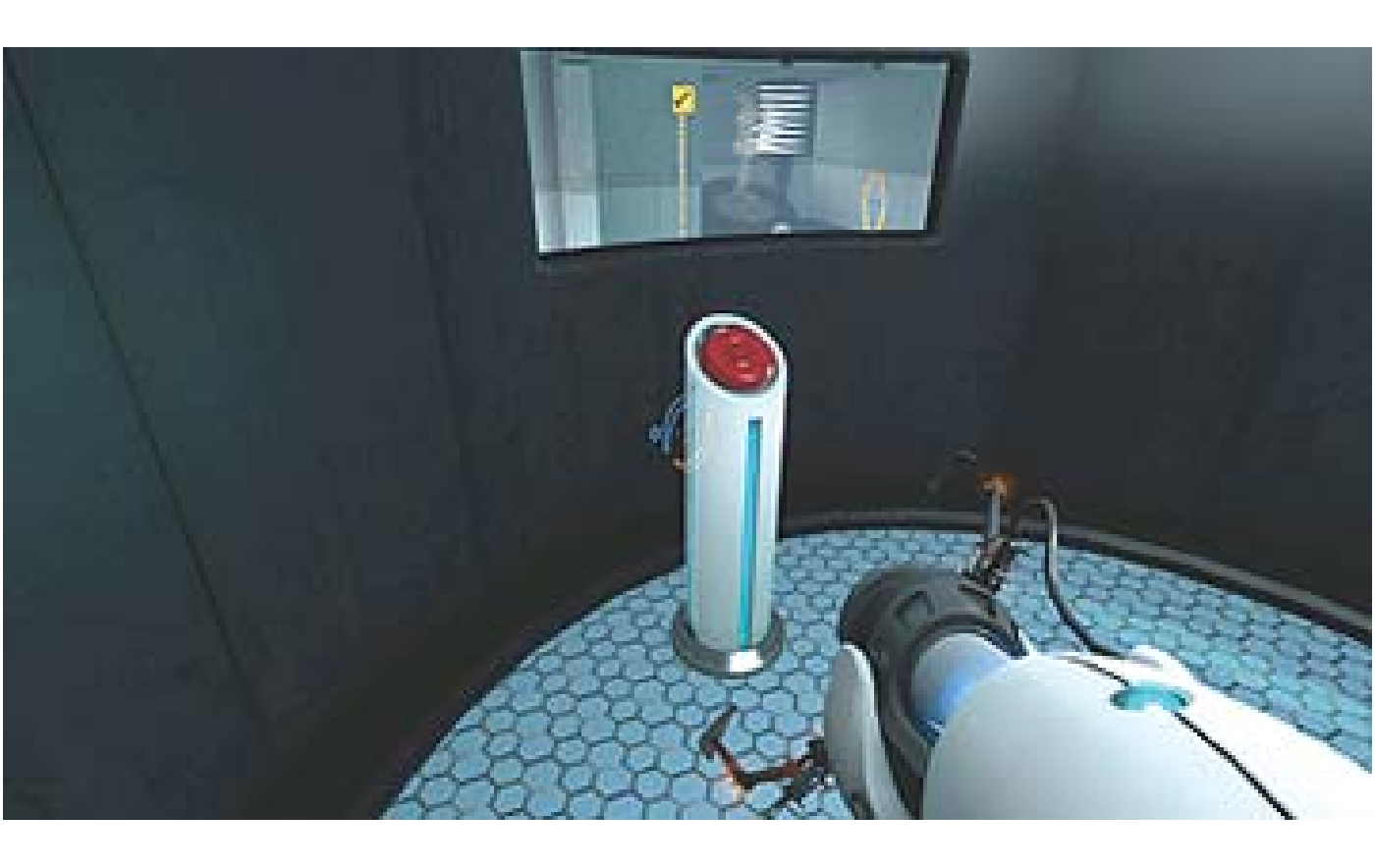


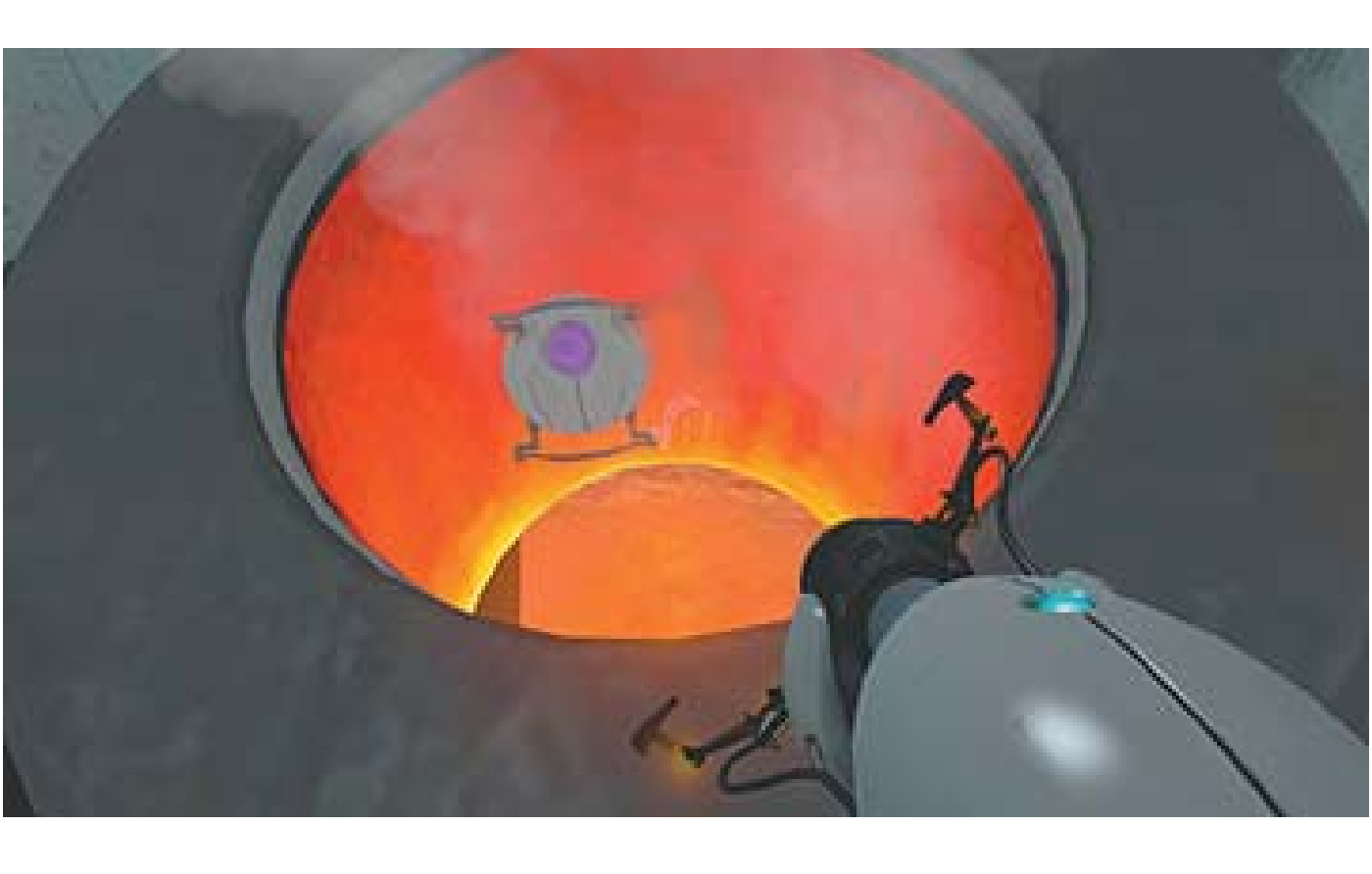
GLaDOS is mounted to a fixture on the ceiling, and surrounding her are a host of monitors displaying what you can presume to be the contents of her unhinged silicon brain. As you know, you're here to "kill" her. She's going to plead for her "life," but give her no quarter after what she's put you through!



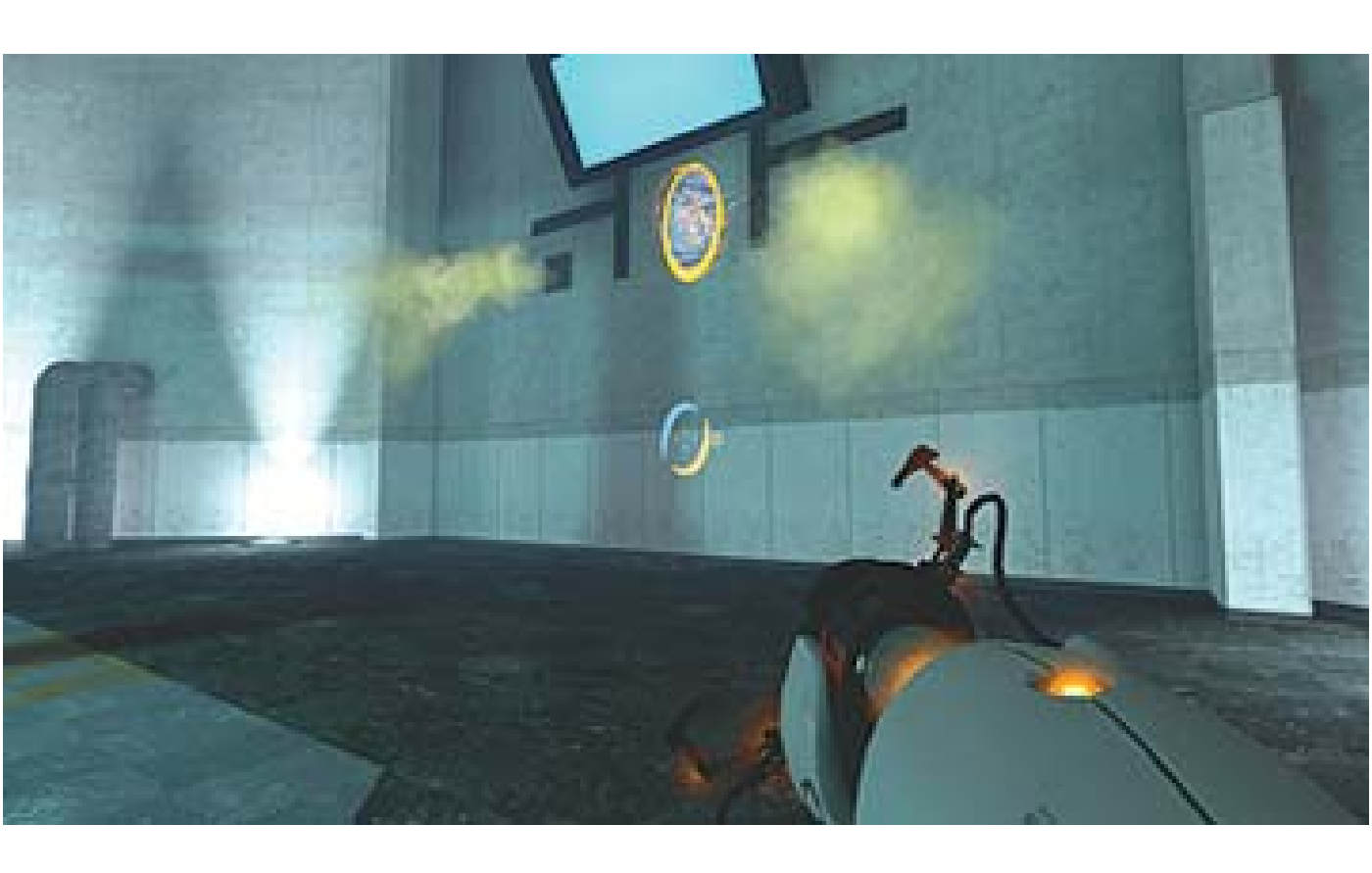


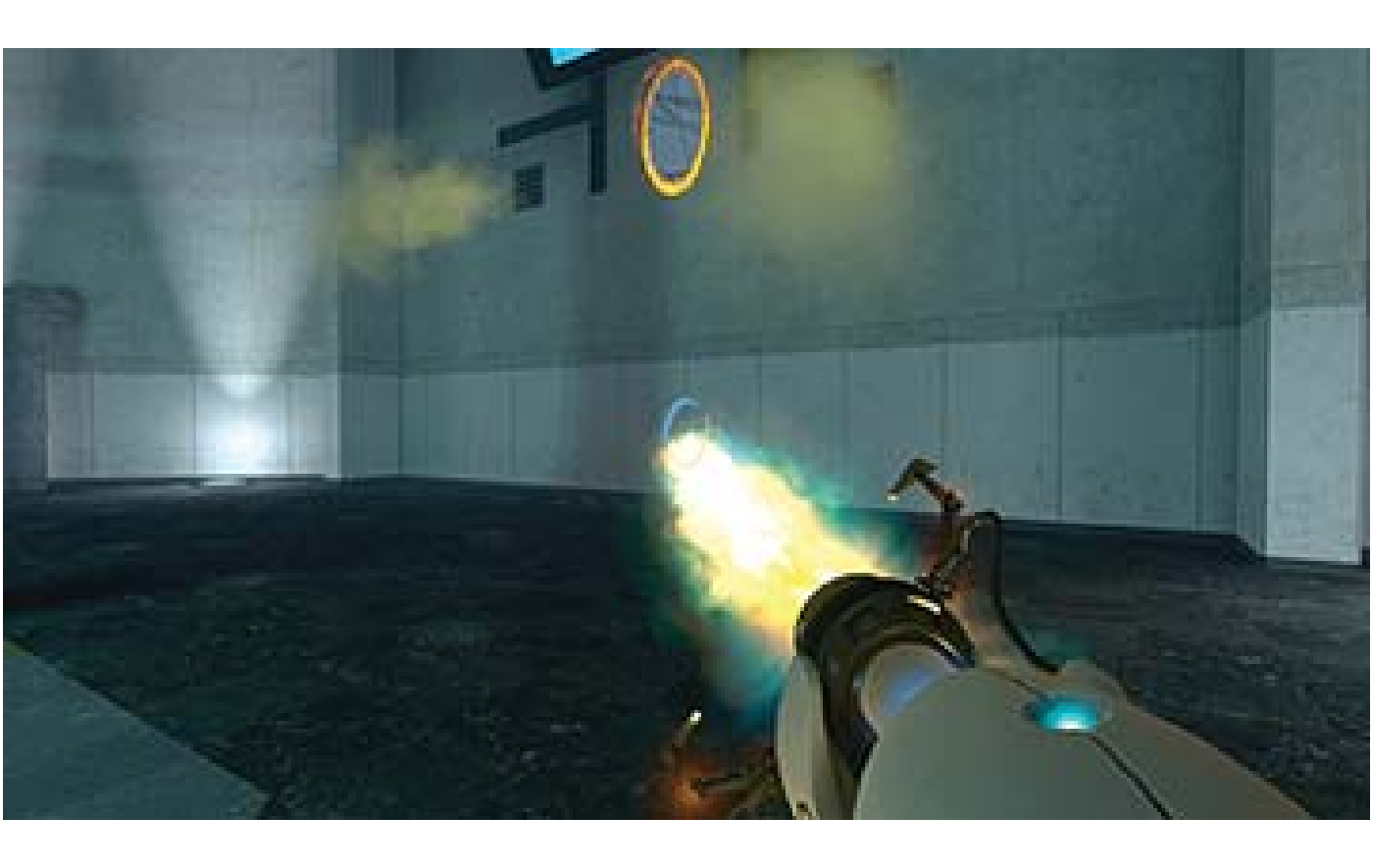


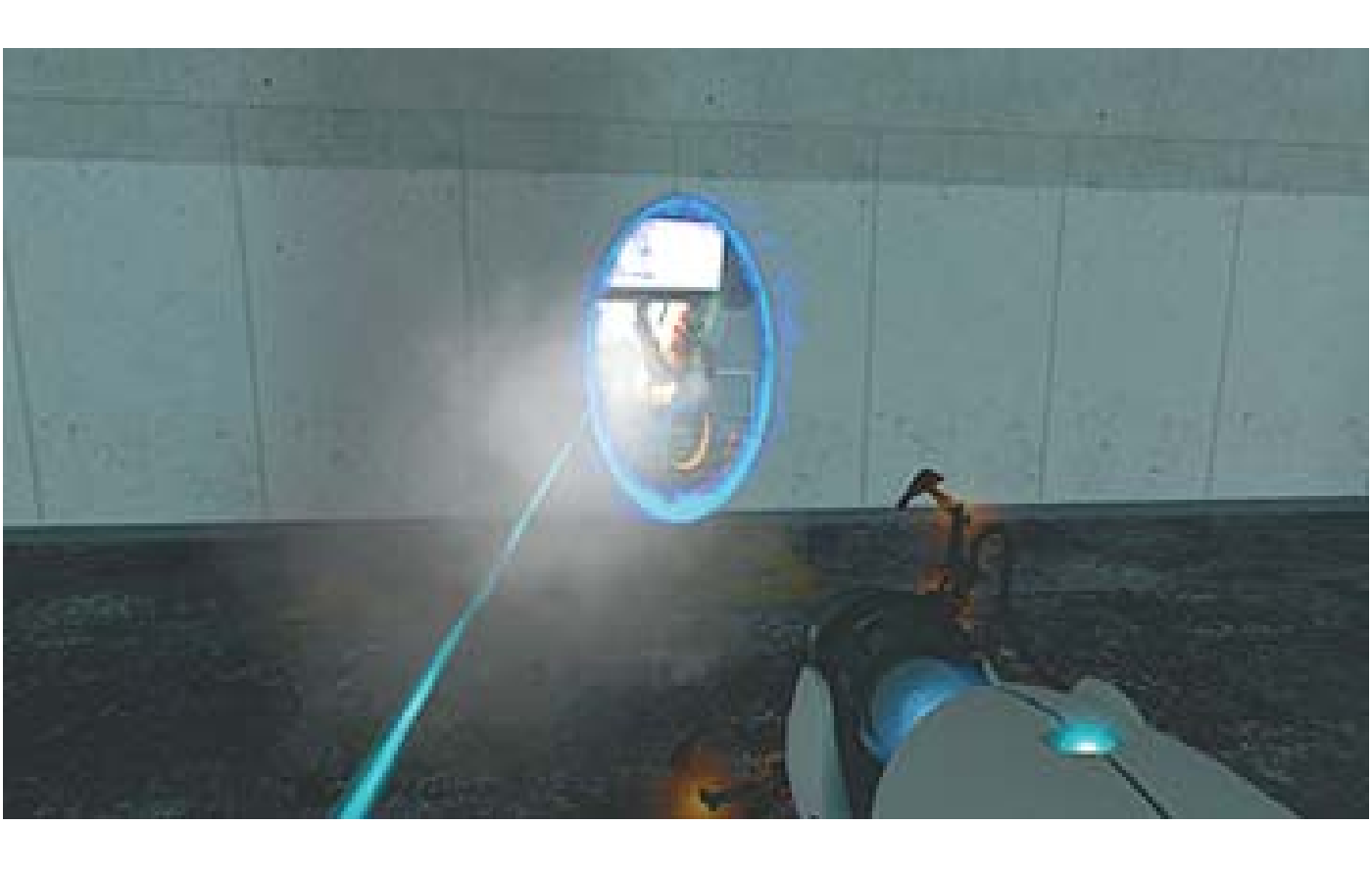




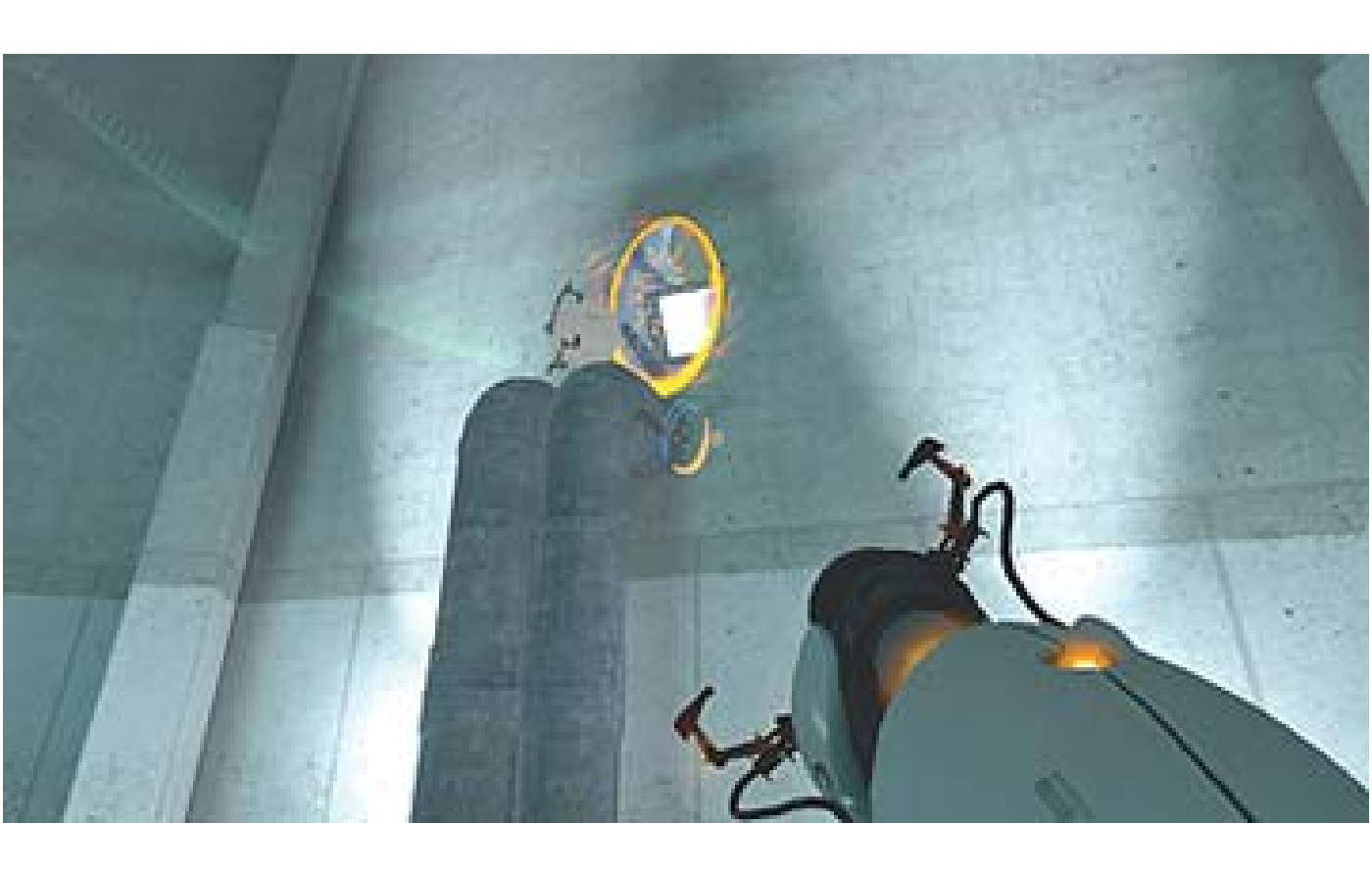
GLaDOS immediately begins to spaz out when you approach her, dropping a spherical object on the ground near her. This is a singular component of the intricate system that makes up GLaDOS's damaged psyche. This means, of course, that you must incinerate it. Carry it to the incinerator behind GLaDOS's fixture, aim your first portal at the top of the stairs leading into the incinerator switch's emplacement, and your second on the wall next to you. Travel through, hit the switch, travel back, and dunk one quarter of GLaDOS's processing core into the flames below. You've just made her mad.

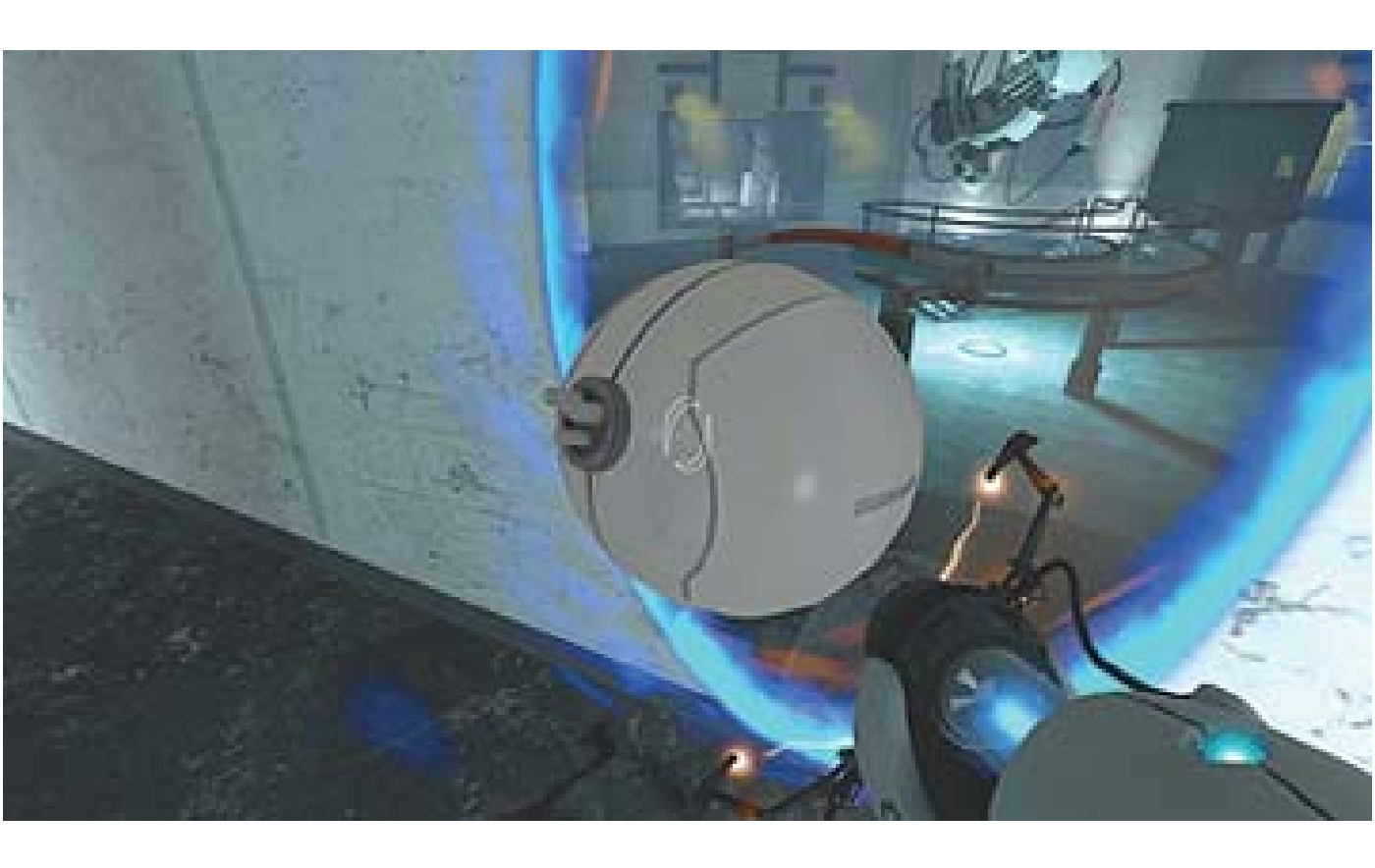


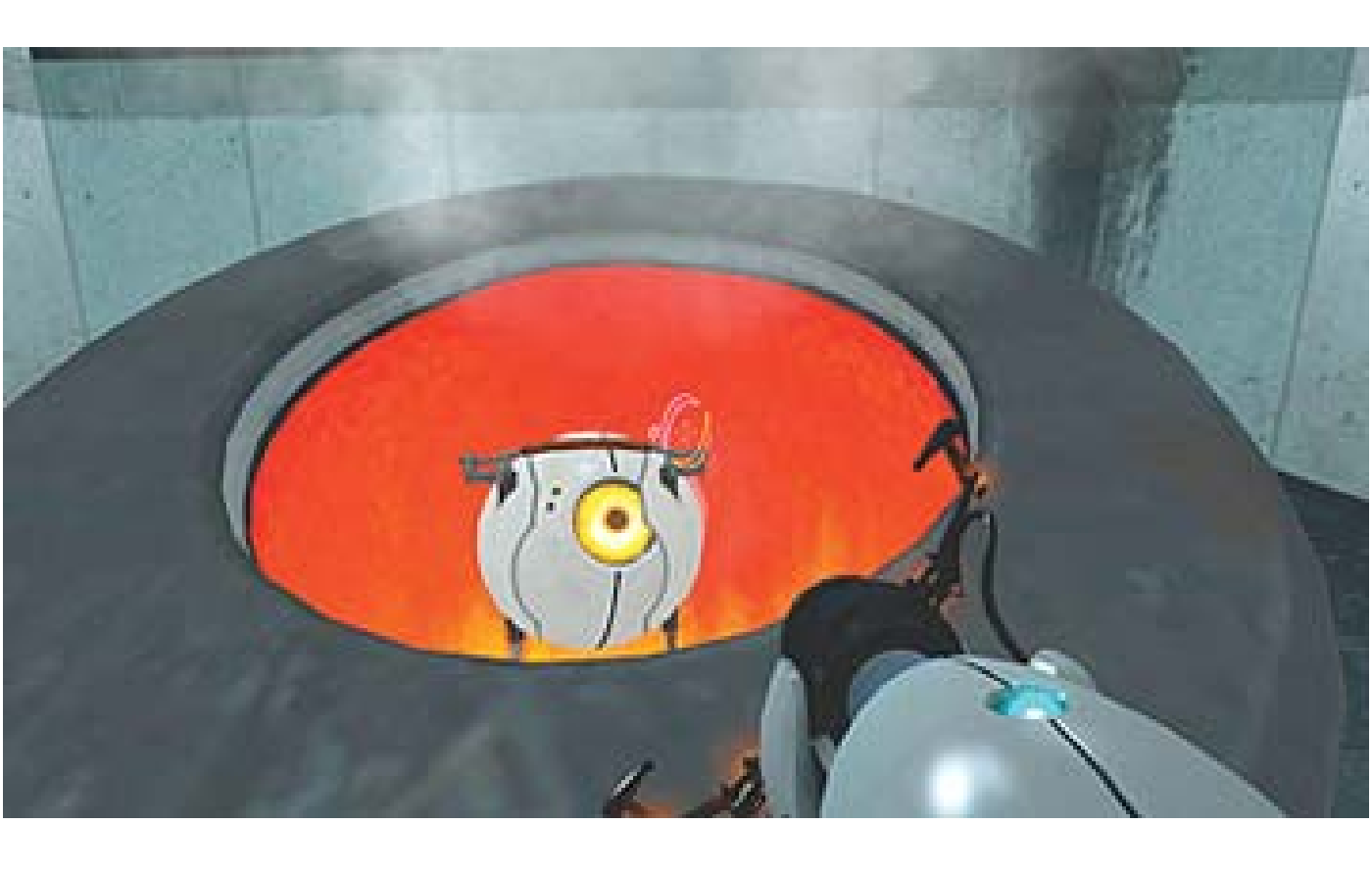




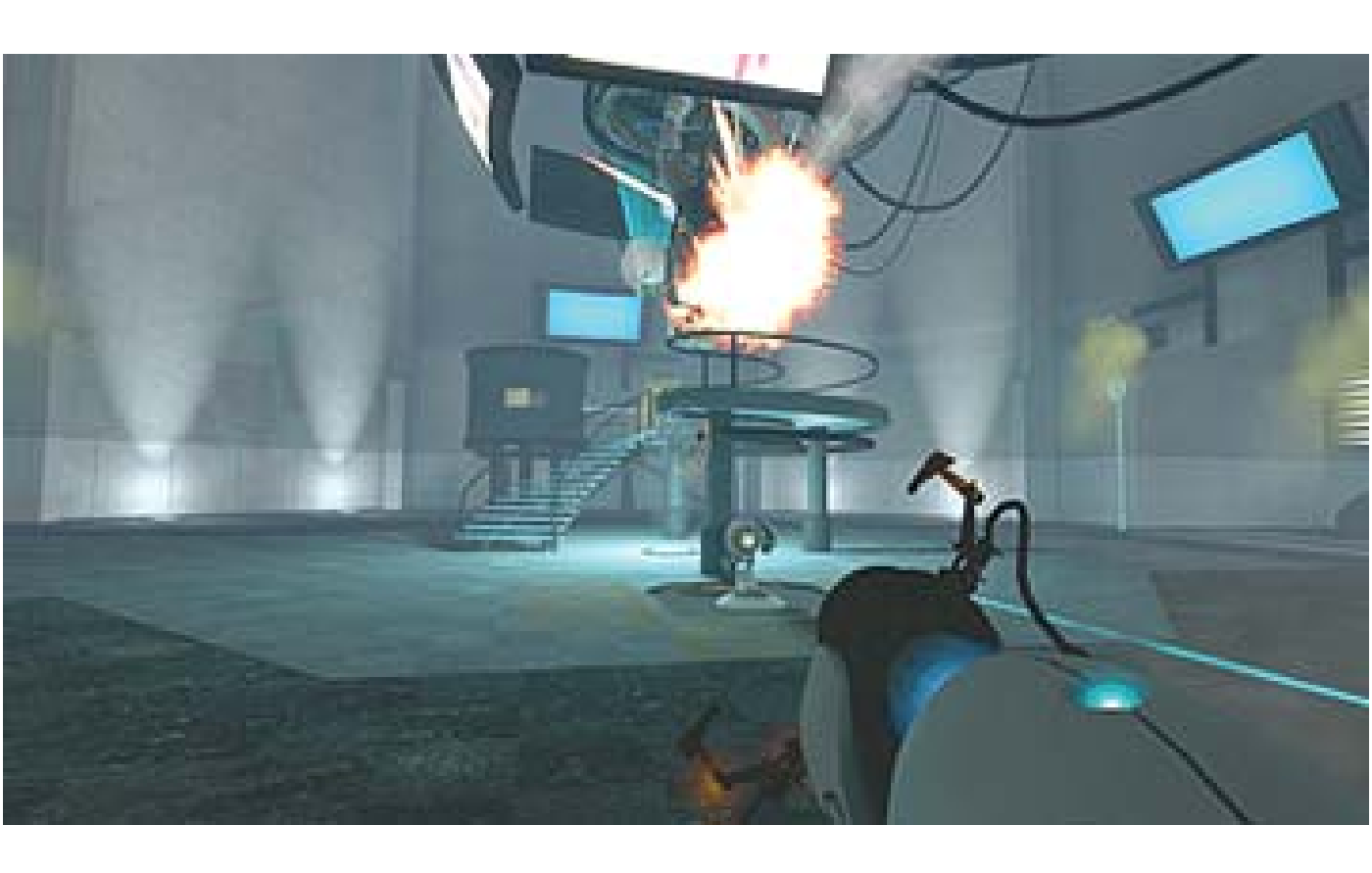
As a result, she's just begun to flood the room with a deadly neurotoxin. Don't worry—it's not enough to kill you, but it does make you wonder what happened to Aperture Science's human staff, doesn't it? In any case, she's also enabled a Rocket Turret, so you have no choice but to use it against her. Aim your first portal just beneath one of the computer monitors, and your second a couple of yards beneath your first, near the ground. Goad the Rocket Turret to shoot into your second portal: This sends its projectile careening into GLaDOS.

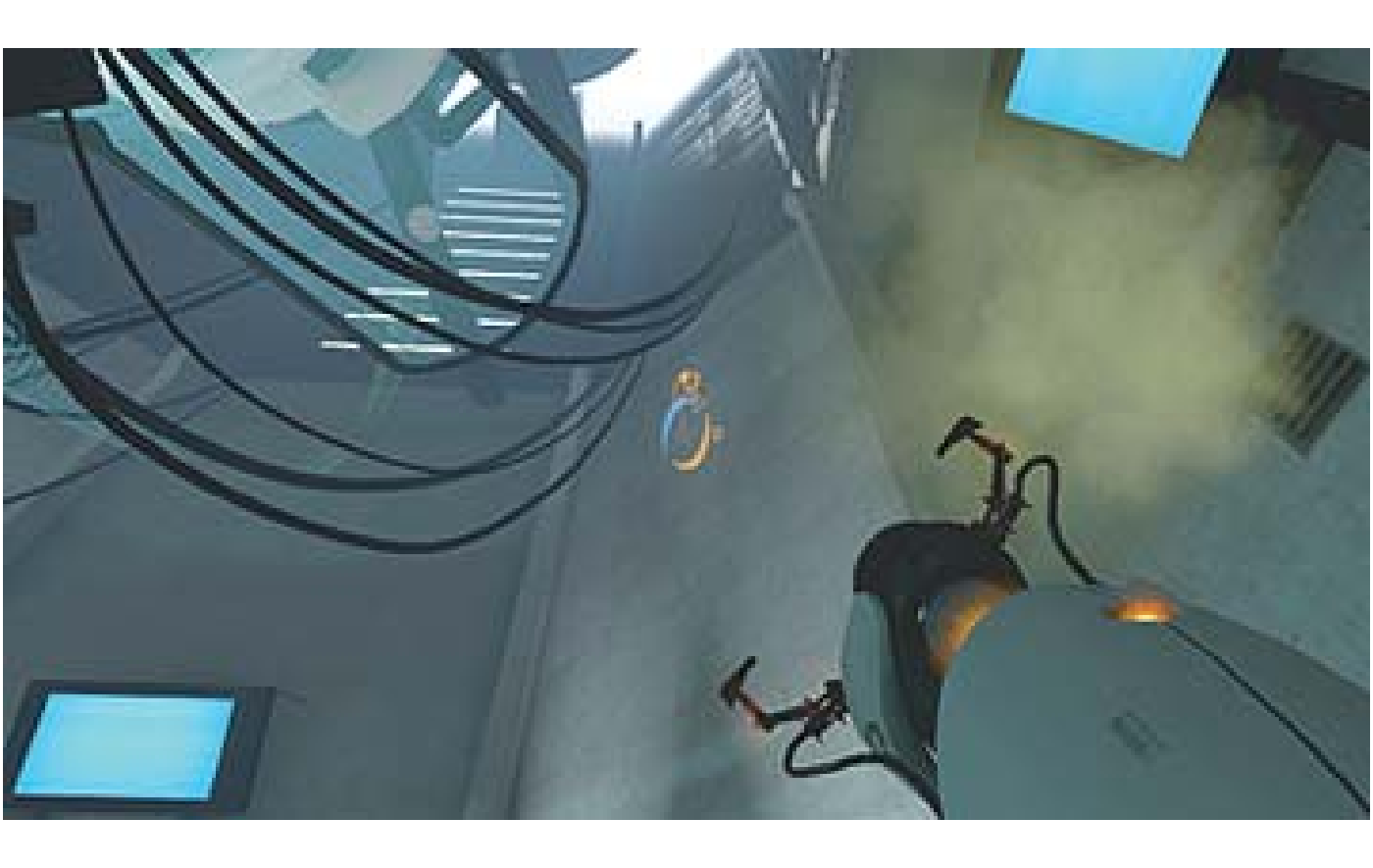


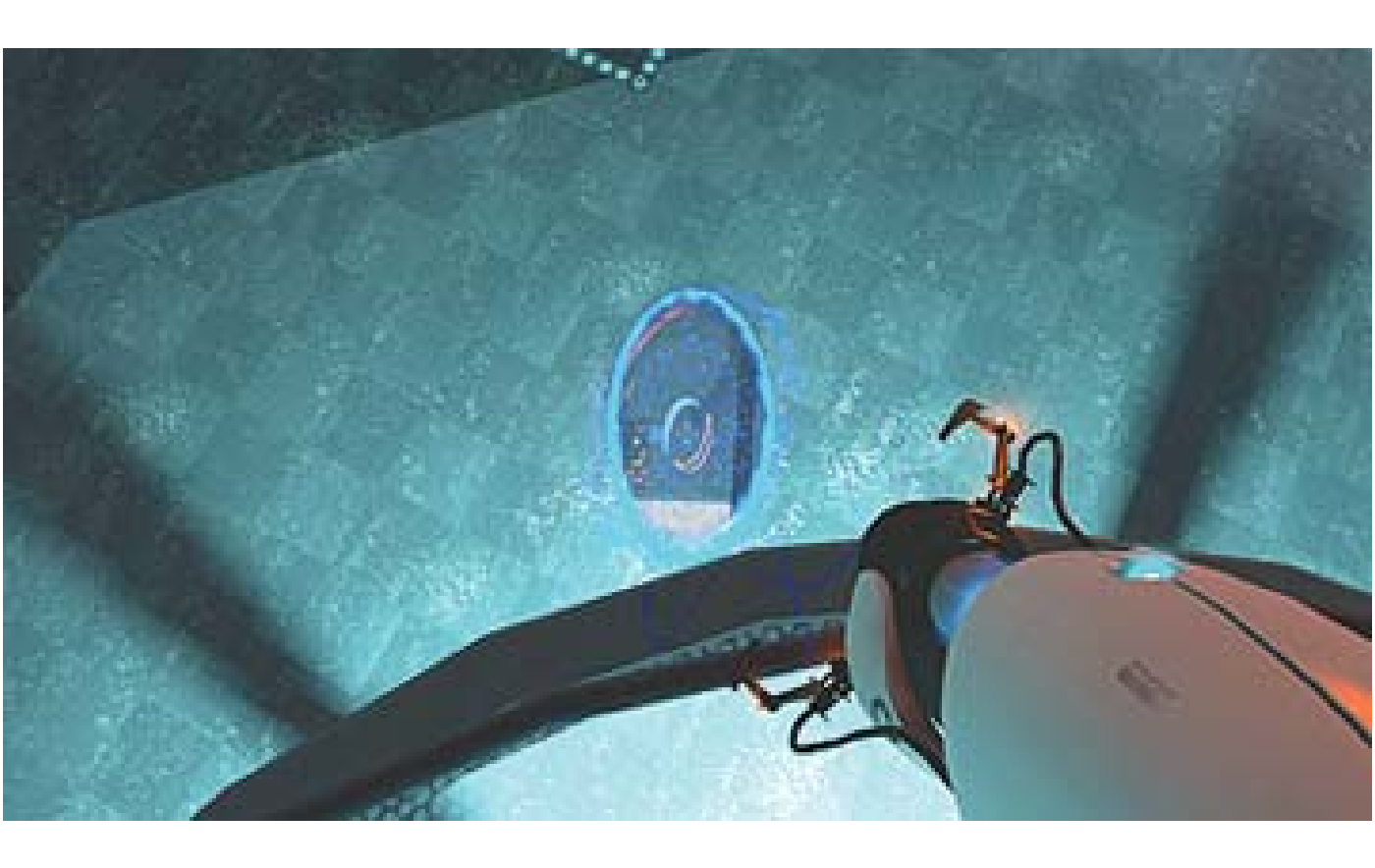


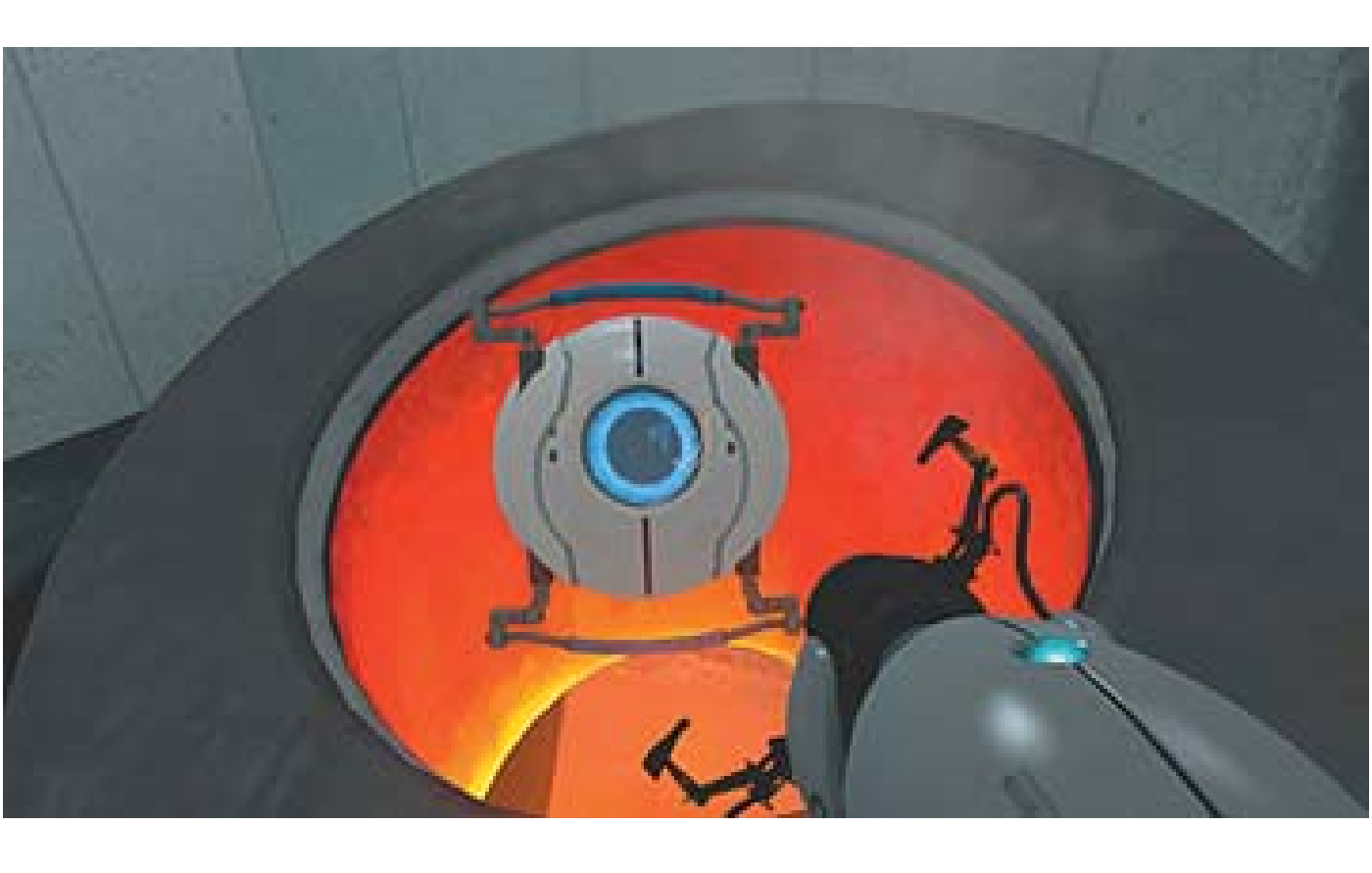


The shock and horror has caused GLaDOS to expel a second piece of her core. It's landed right above a piece of piping. Retrieve it with your portals, and give it to the incinerator.

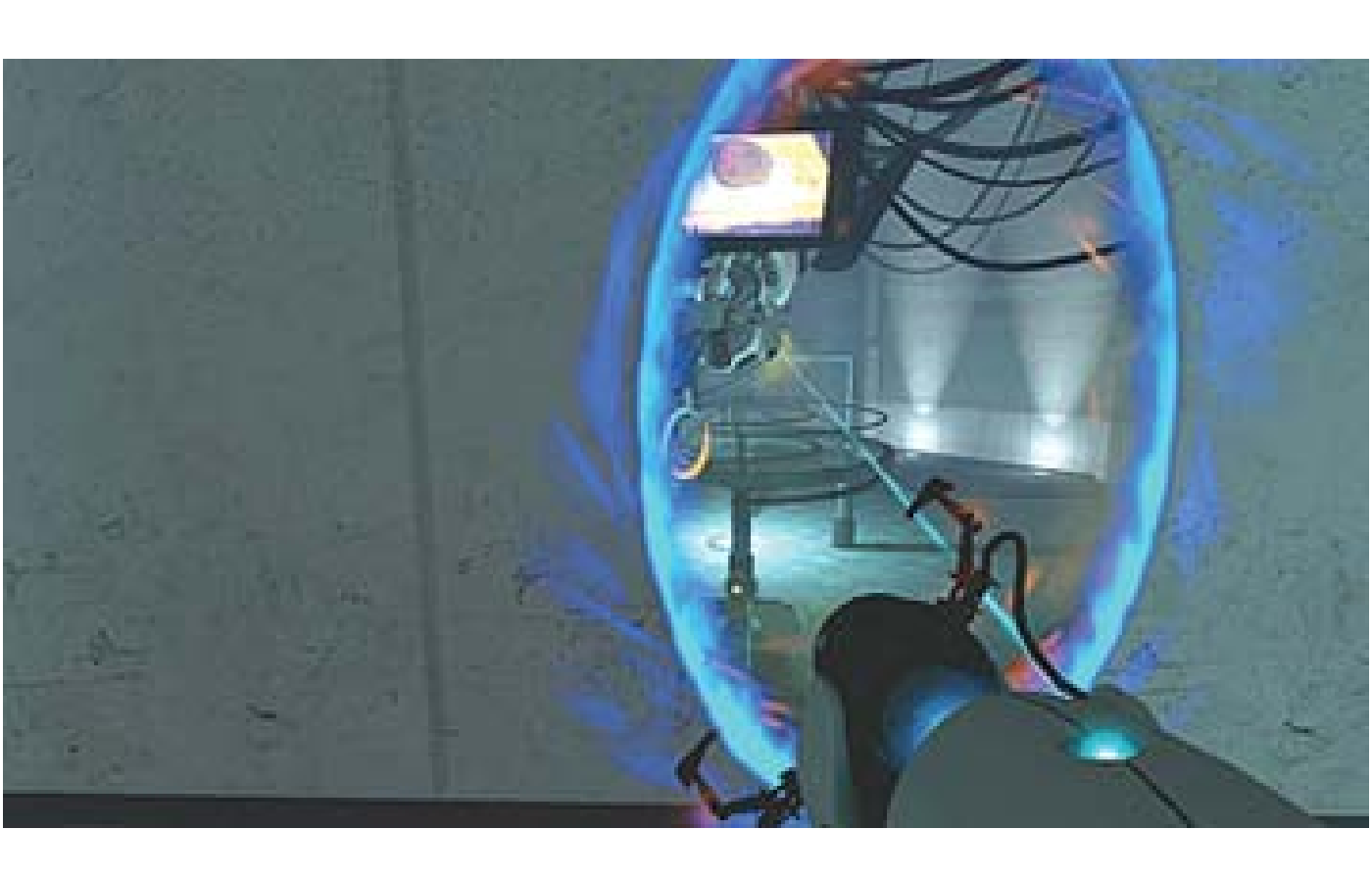


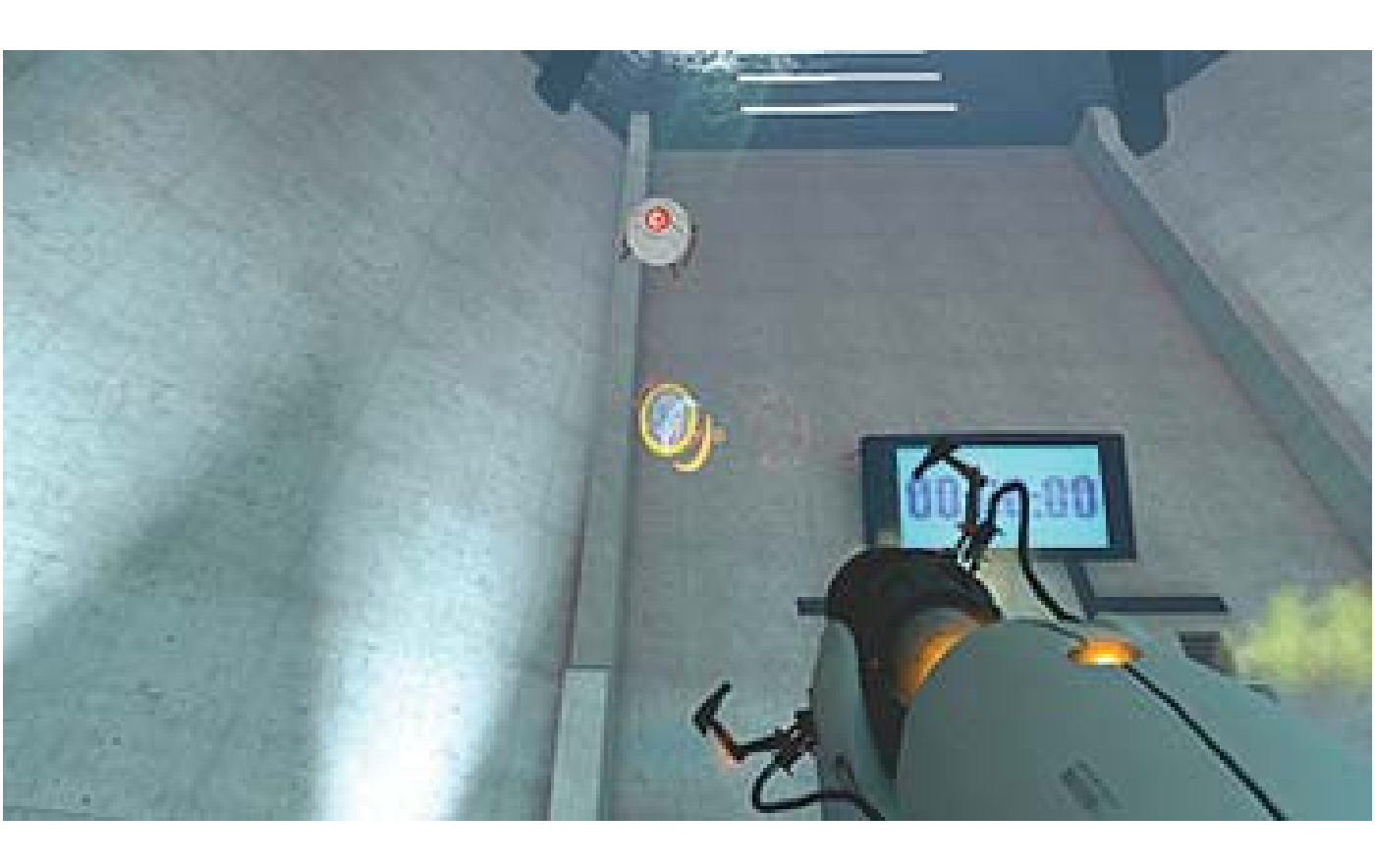


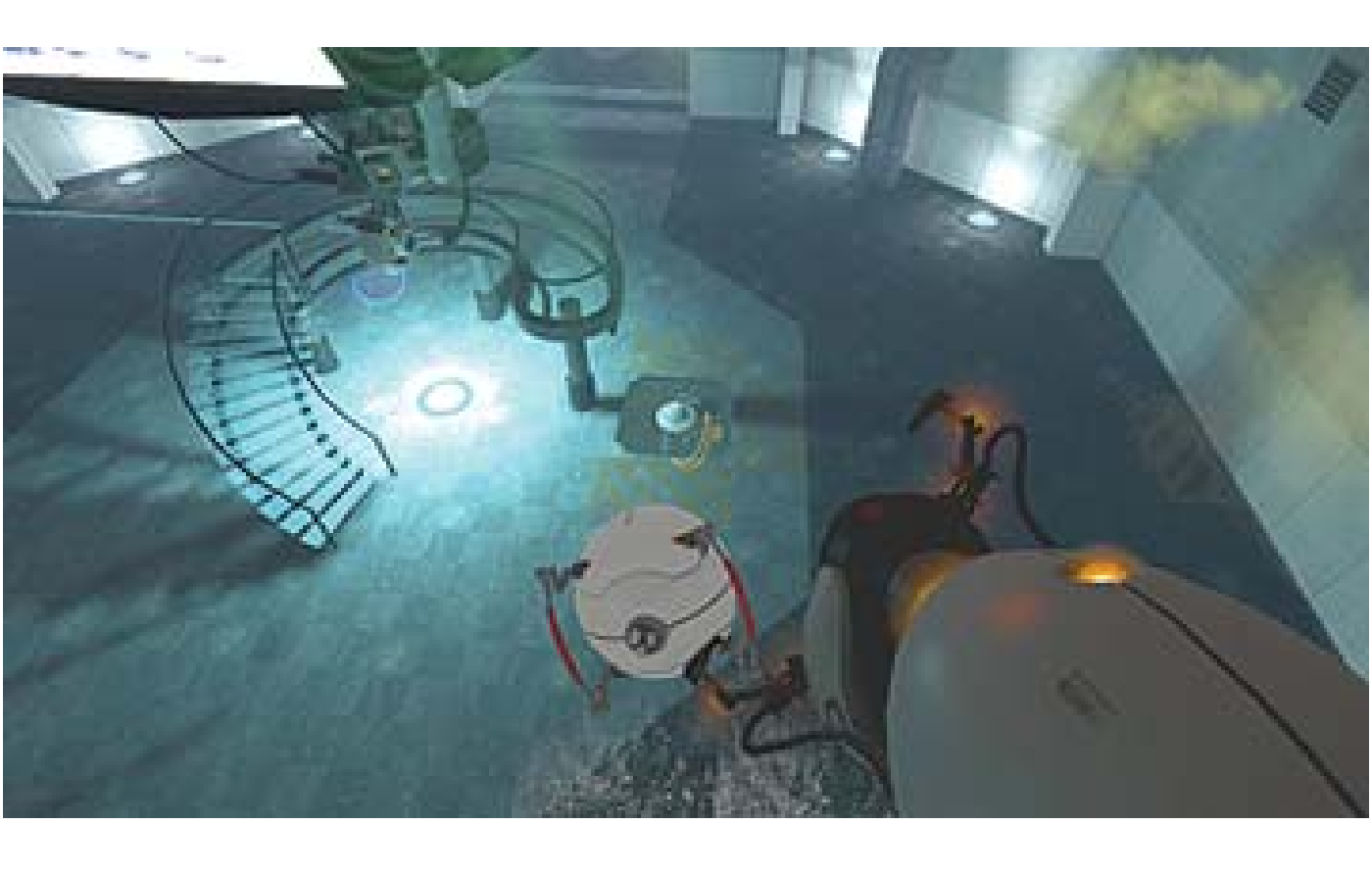




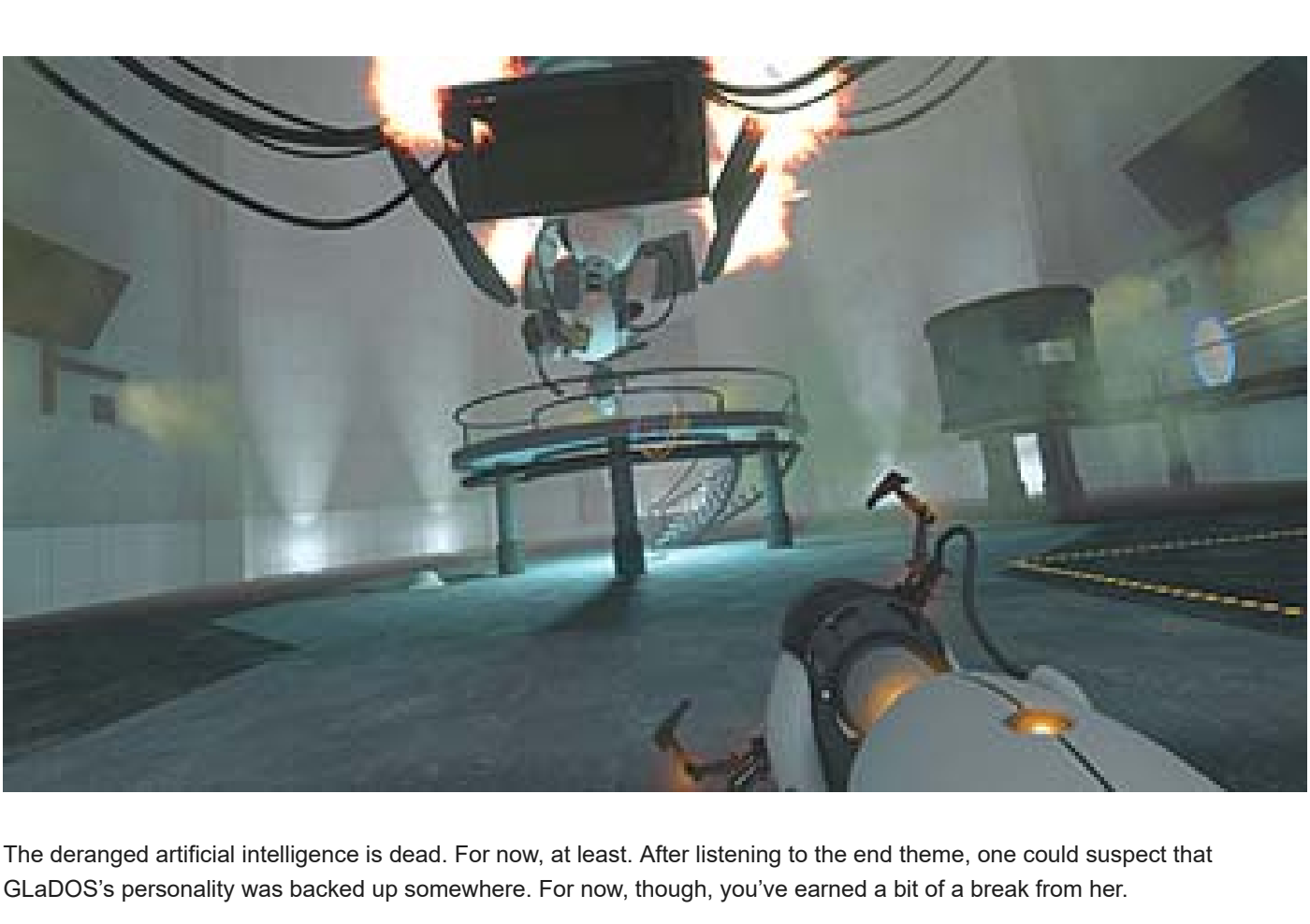
The Rocket Turret is back. Fool it into blasting GLaDOS again. The third piece of her core lands on her fixture, on what looks like a mesh net. Place your first portal on the wall opposite it. Next, run up the stairs onto the catwalk below GLaDOS's fixture, stand on the handrail, and fire your portal on the ground. Jump through, and fling to the net where her core is. Jump off and torch it.



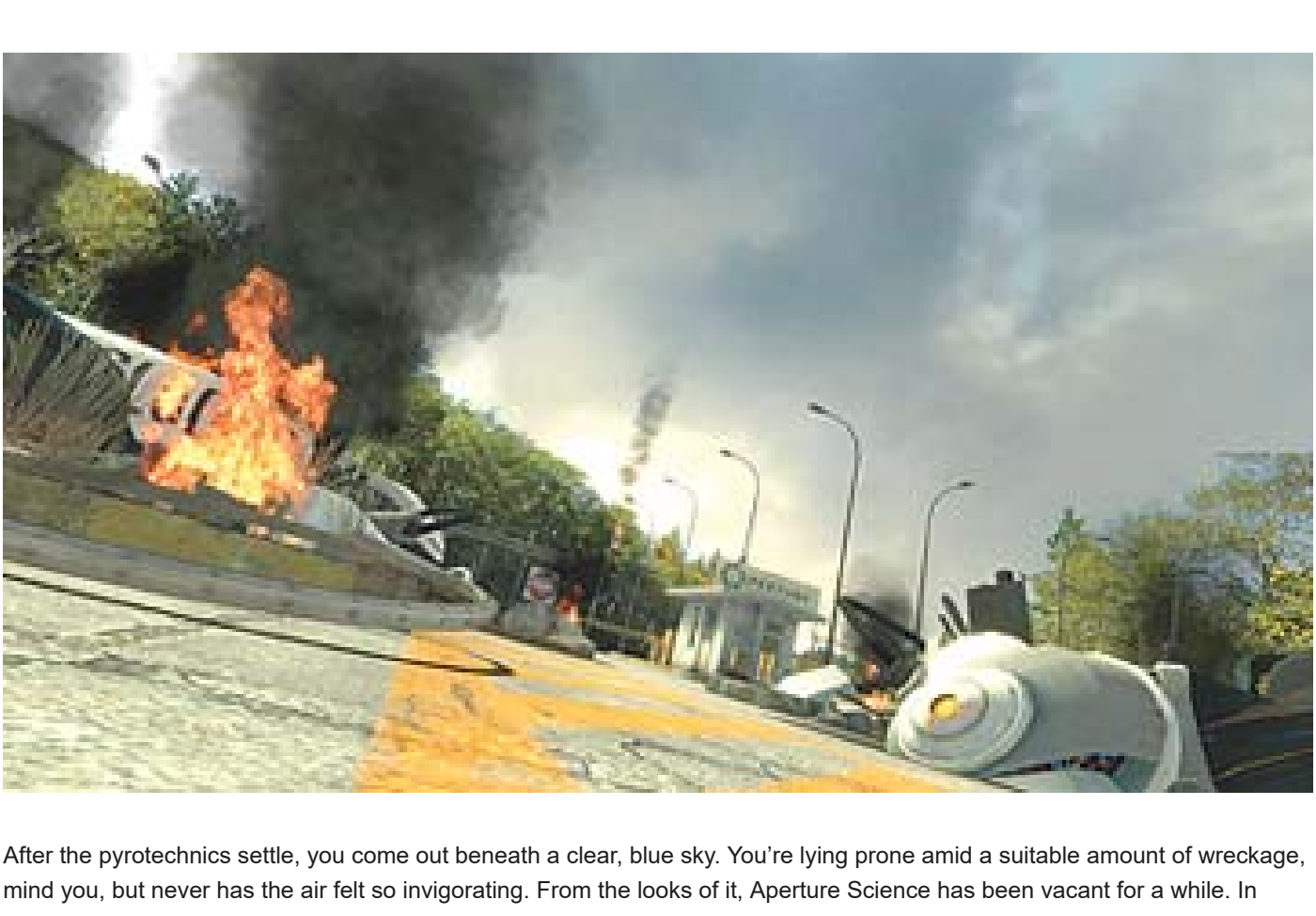




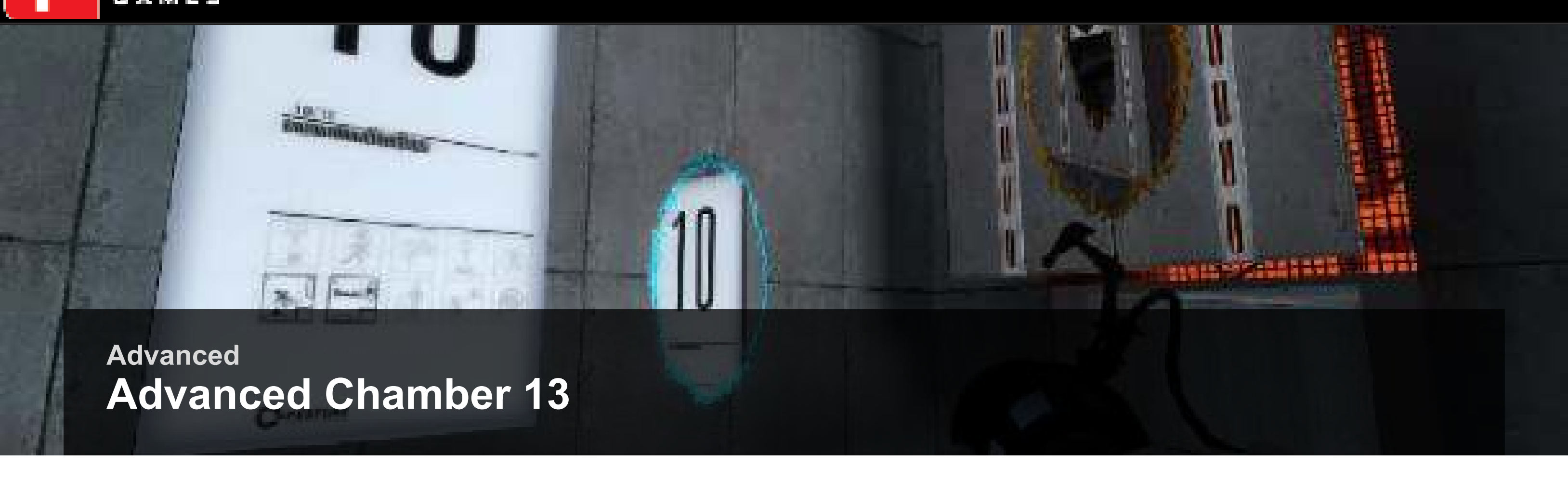
Yet again the Rocket Turret emerges. Portal its missile to GLaDOS one last time. This last core is suspended in midair, held in place by what looks like a sort of tractor beam. Place a portal above and behind it, and another under GLaDOS's catwalk. Fling to the core and collide with it to bring it down. Whereas the other cores seemed somewhat personable (or at least informative, as with the previous one's cake recipe), this one is downright vile, grunting and snarling like a caged beast. Who knew GLaDOS was so multifaceted? Oh well. To the incinerator with it.



The deranged artificial intelligence is dead. For now, at least. After listening to the end theme, one could suspect that GLaDOS's personality was backed up somewhere. For now, though, you've earned a bit of a break from her.



After the pyrotechnics settle, you come out beneath a clear, blue sky. You're lying prone amid a suitable amount of wreckage, mind you, but never has the air felt so invigorating. From the looks of it, Aperture Science has been vacant for a while. In what state will you find the world once you've mustered the energy to rise from your groggy repose? Only time will tell.

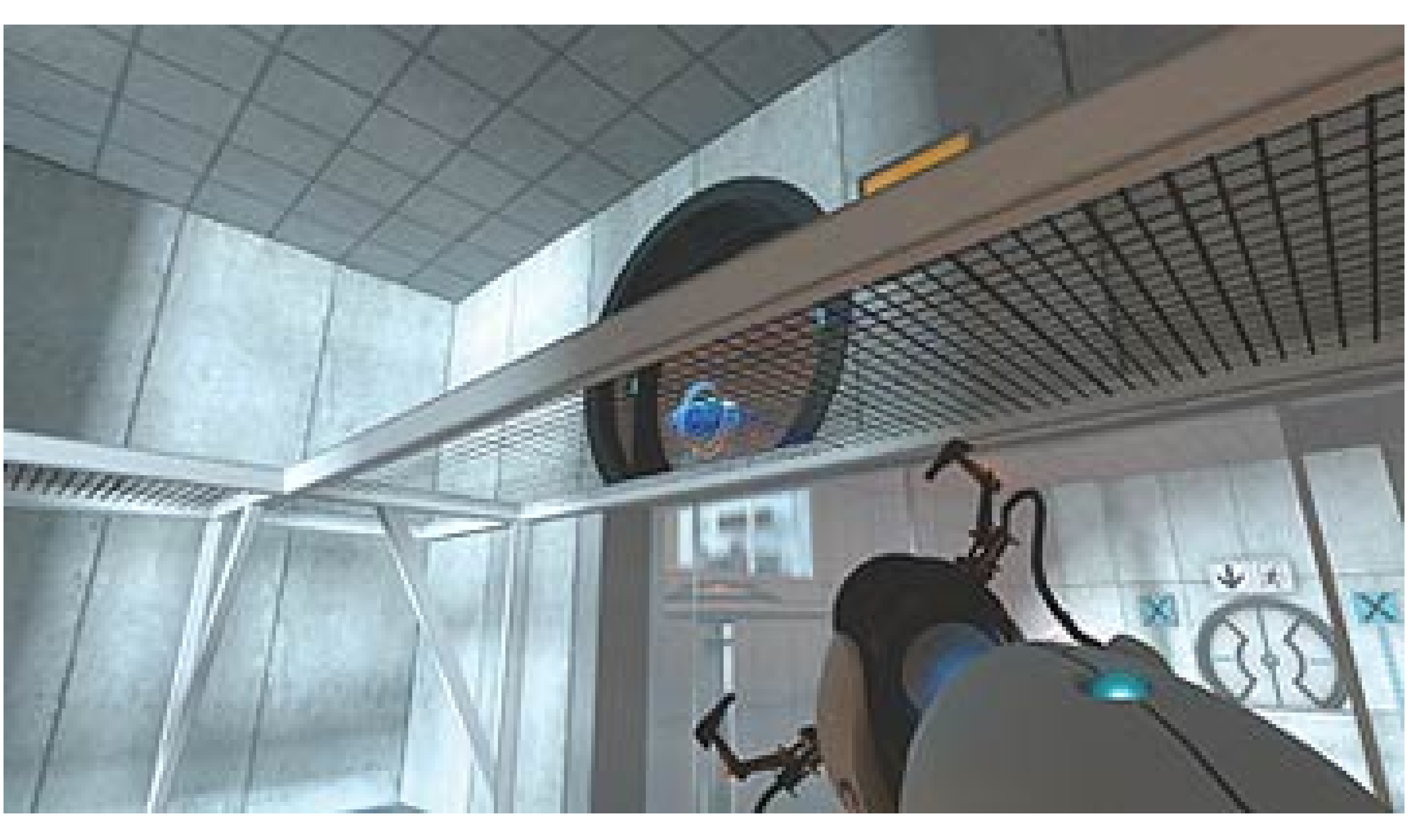


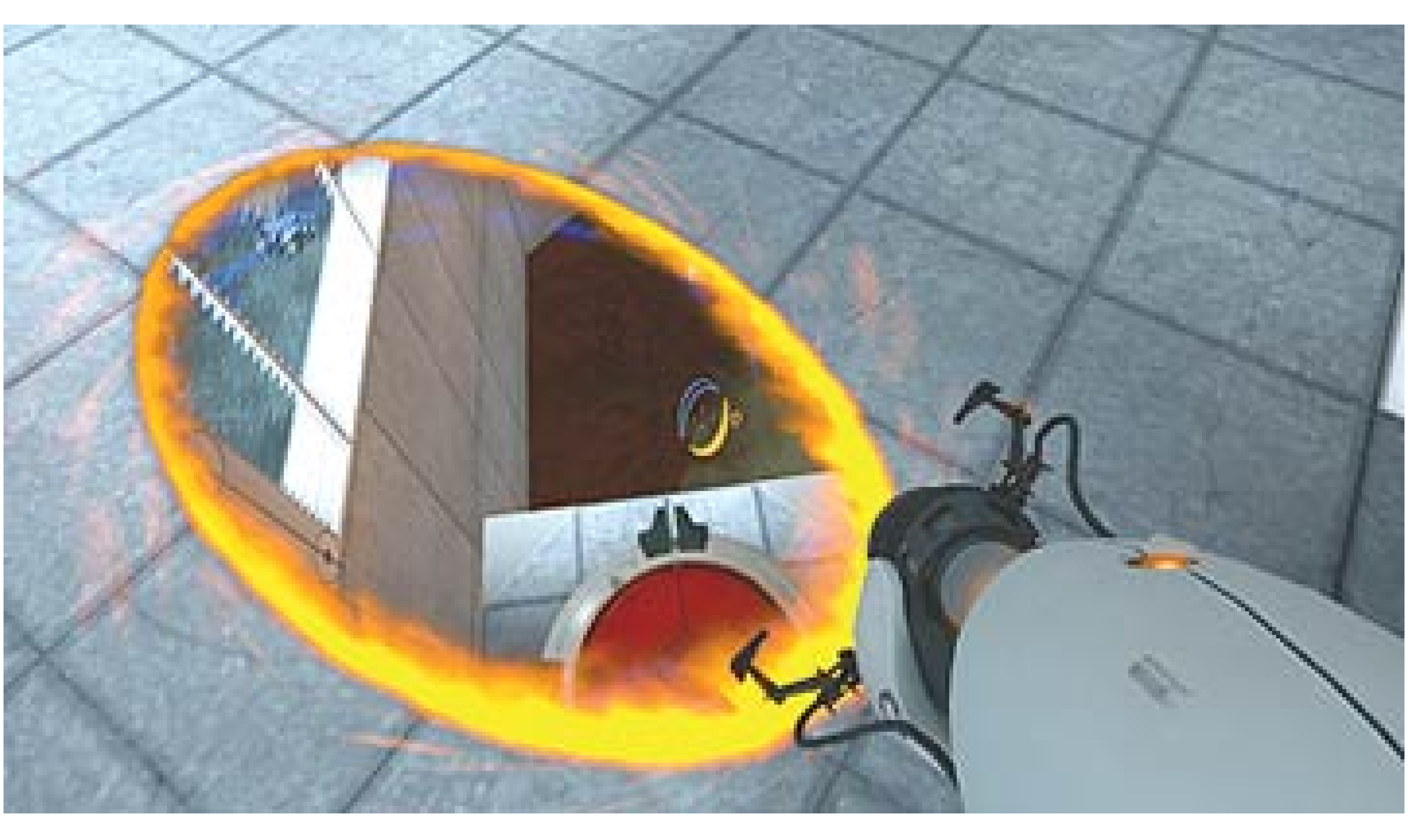
Advanced

Advanced Chamber 13

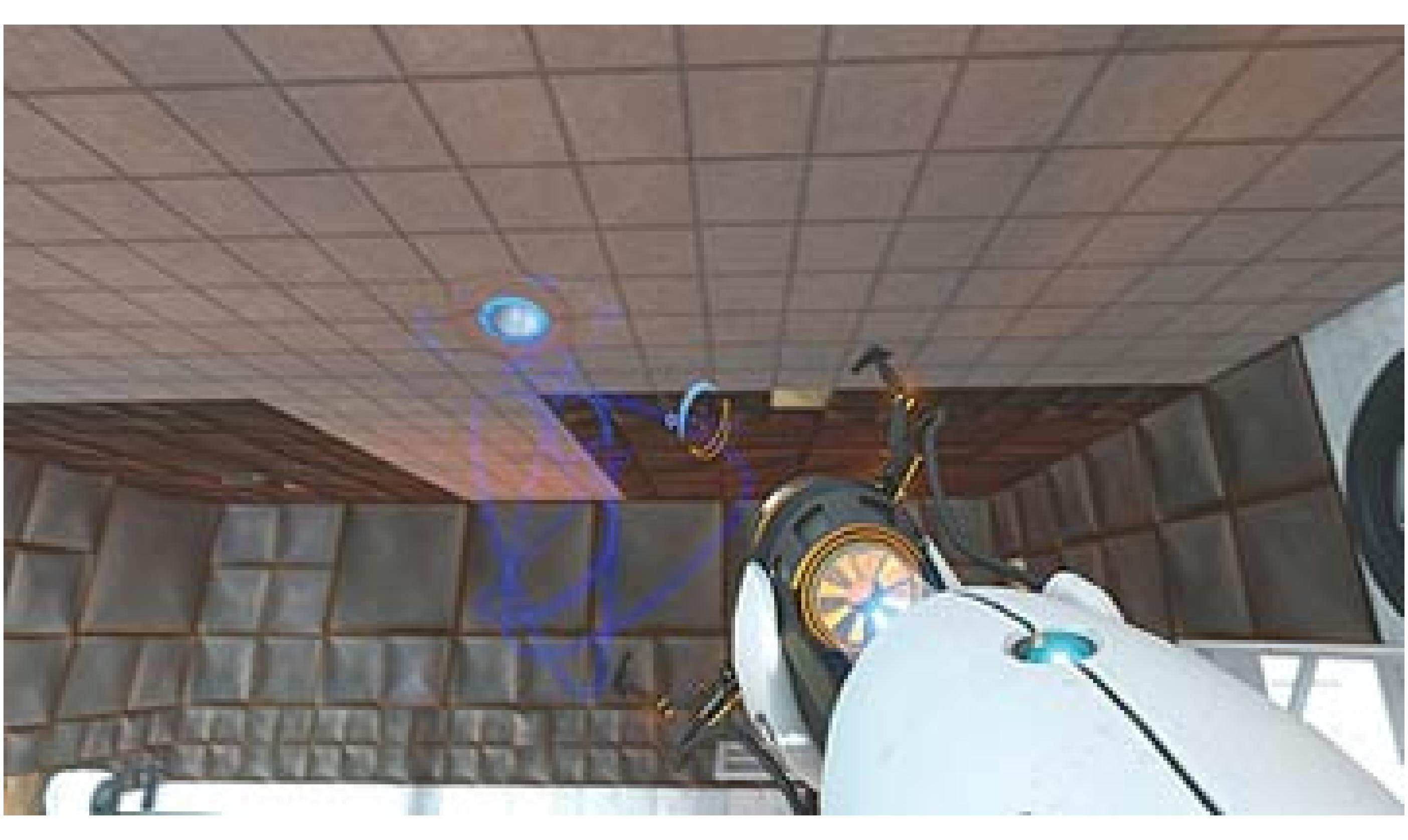
Note

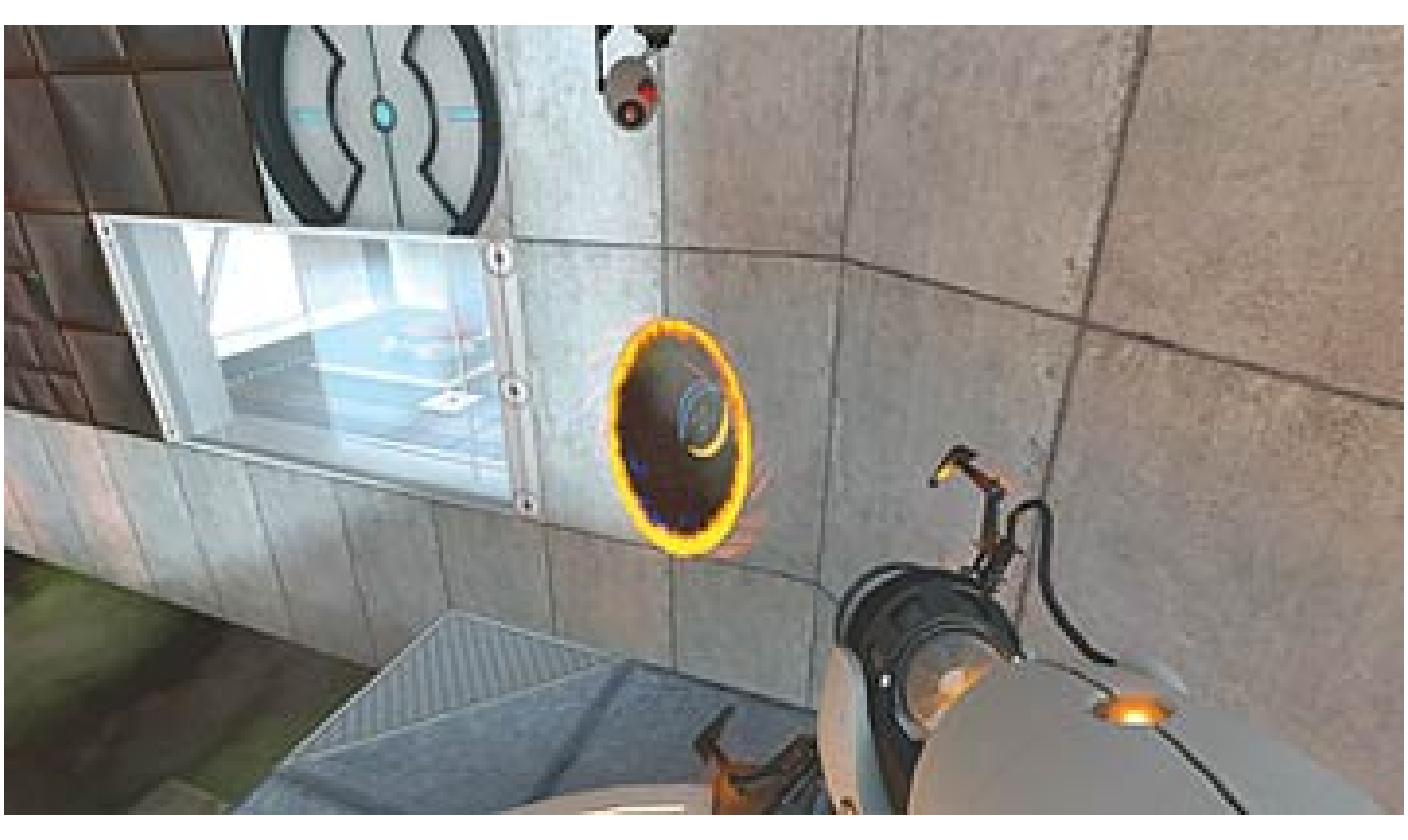
Advanced Chambers are modified versions of Test Chambers 13 through 18 that become available after you've completed the game. They've been tweaked to be much more difficult than their normal counterparts, so pay heed to the precise strategies provided here!



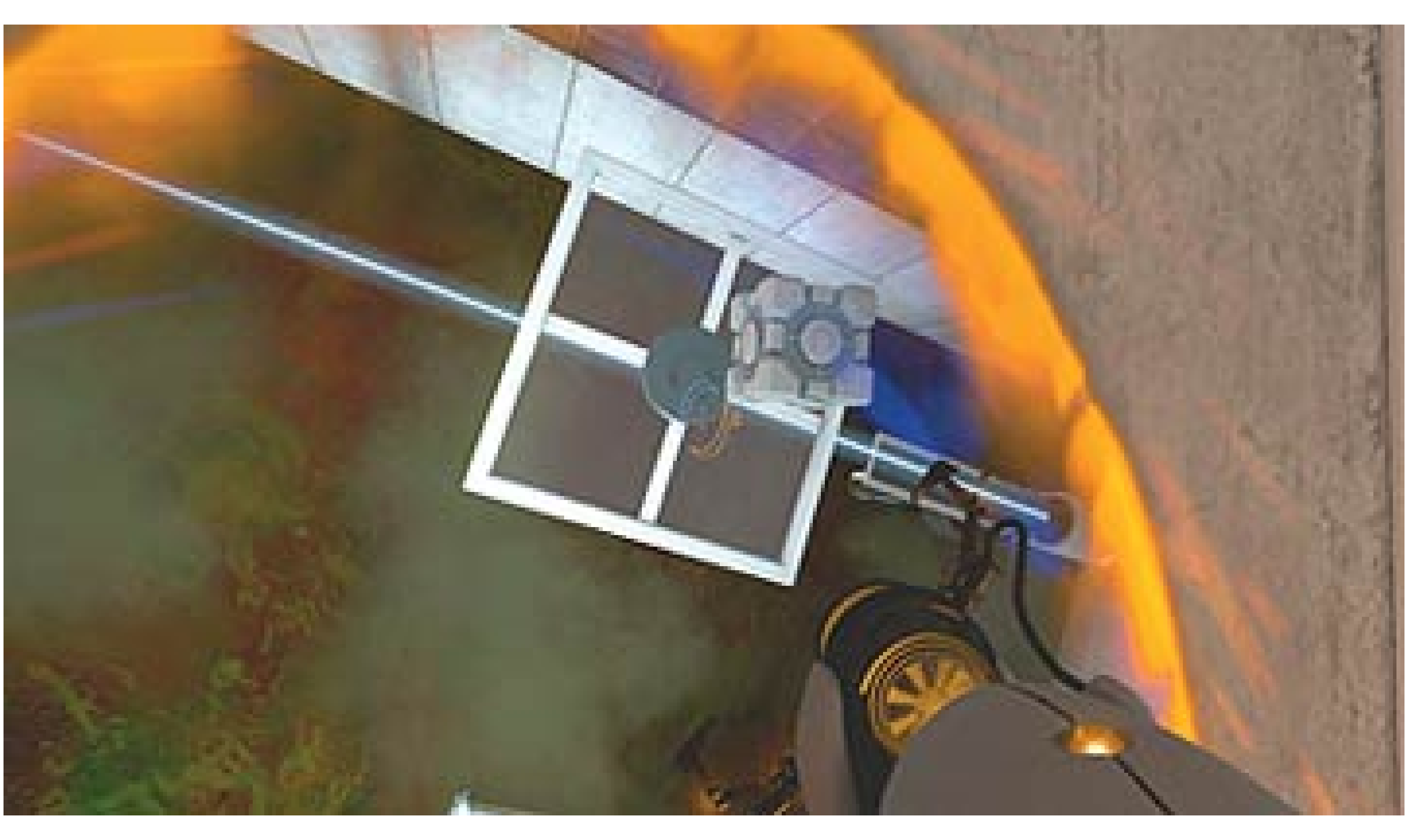


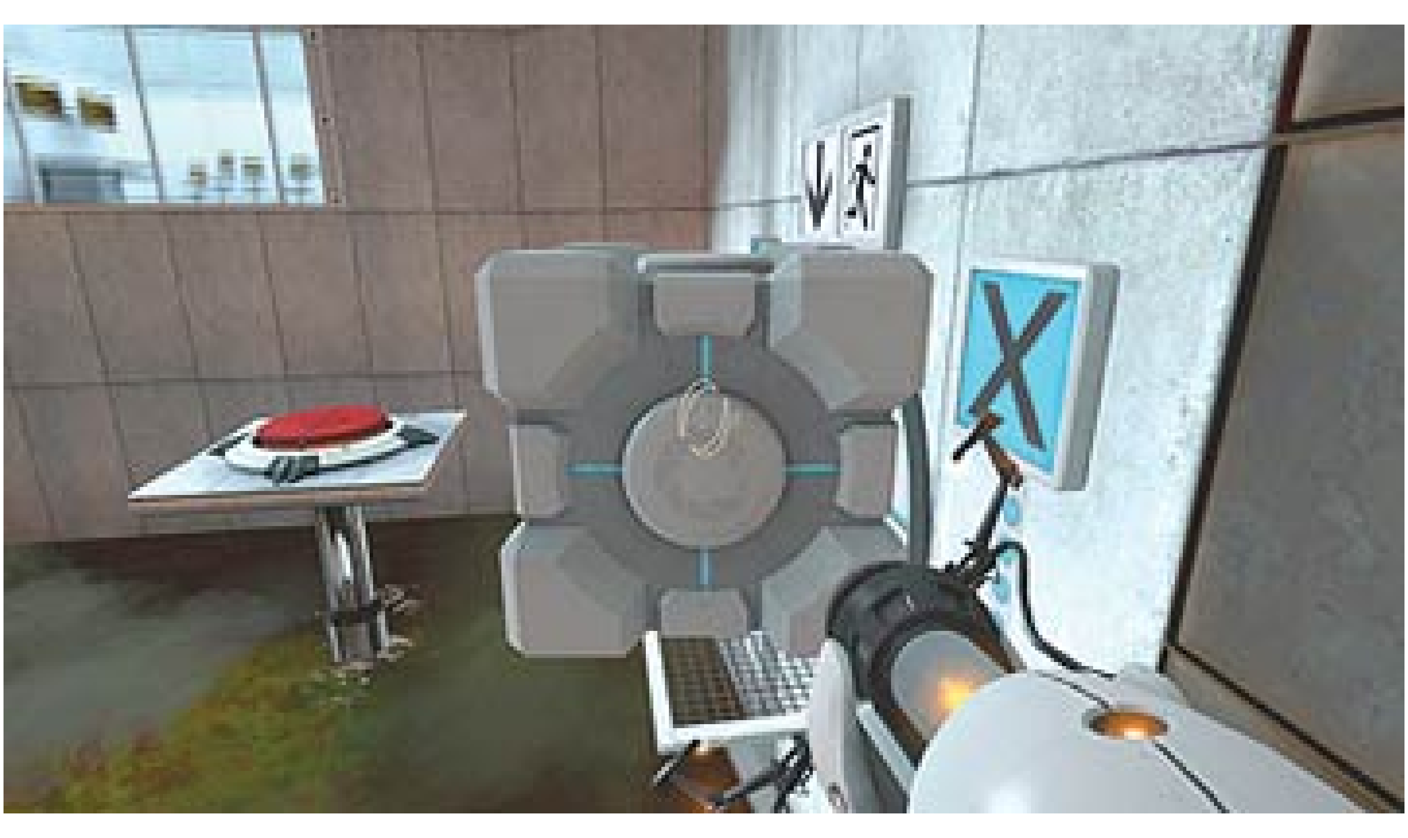
Test Chamber 13's advanced version hosts one key difference: There is no floor in the main room—in its place, there's a pool of poisonous goo. But worry about that later. There's no Weighted Storage Cube to hold down the red button in the first room, so to get through the blast doors, stand on the button, aim into the next chamber from under the mesh surface of the ledge above you, and place your portal above the taller elevated platform. Jump in to your second portal and land on the button.



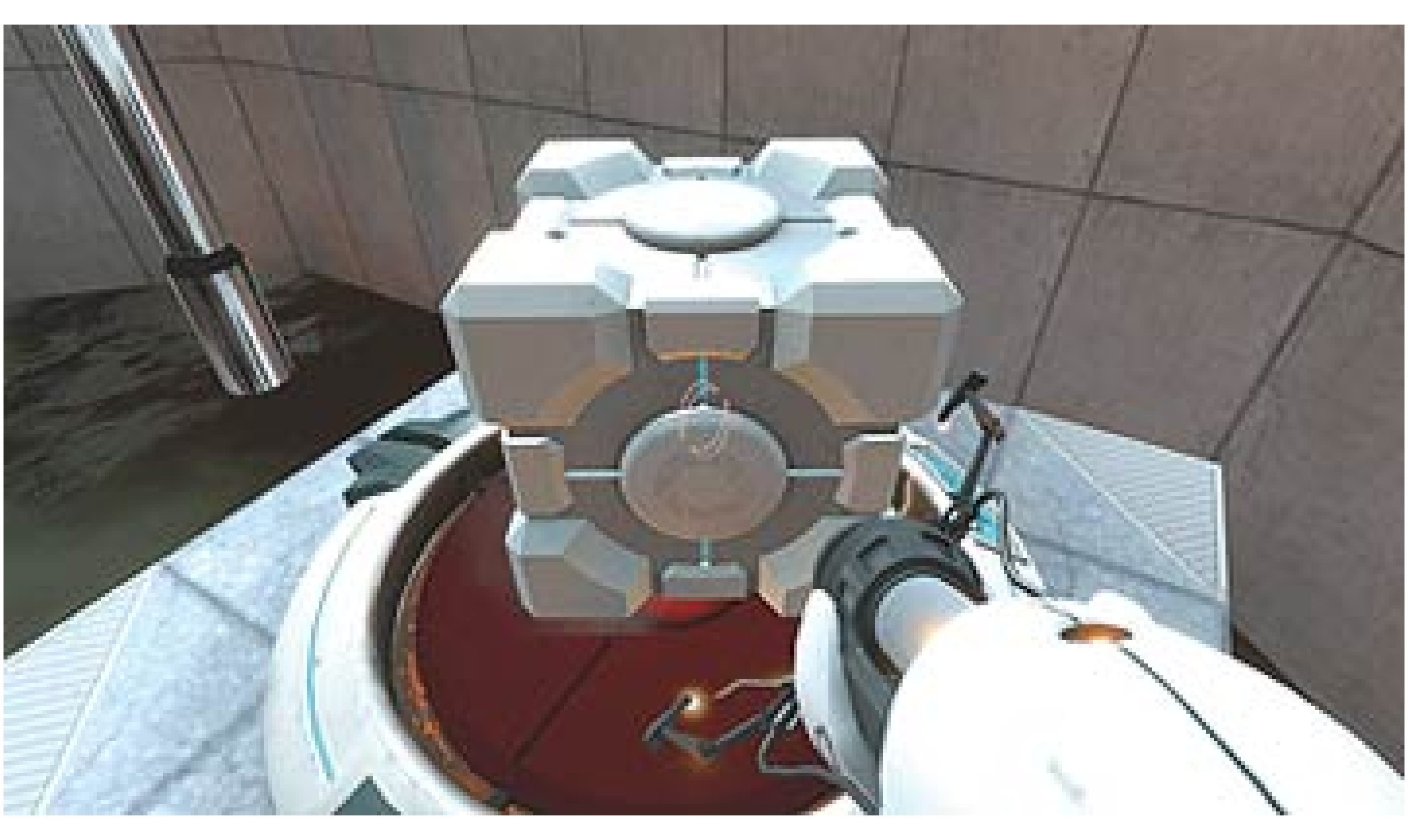


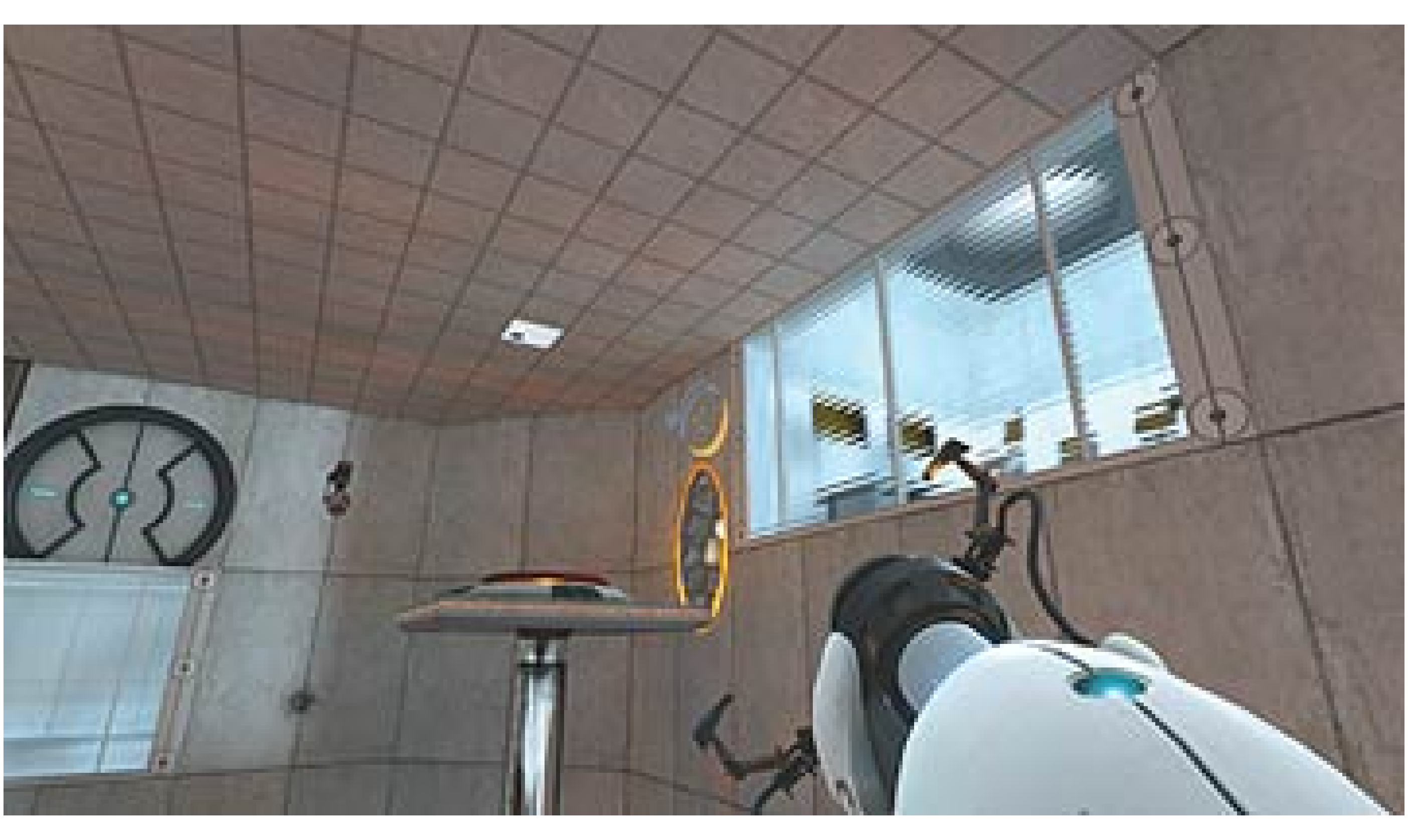
Now, you're going to activate the Ball Catcher the same way as in normal mode: Place your first portal on the ceiling above the Catcher, and your second on the charred spot where the energy ball makes contact with the wall. The horizontal lift is now active.



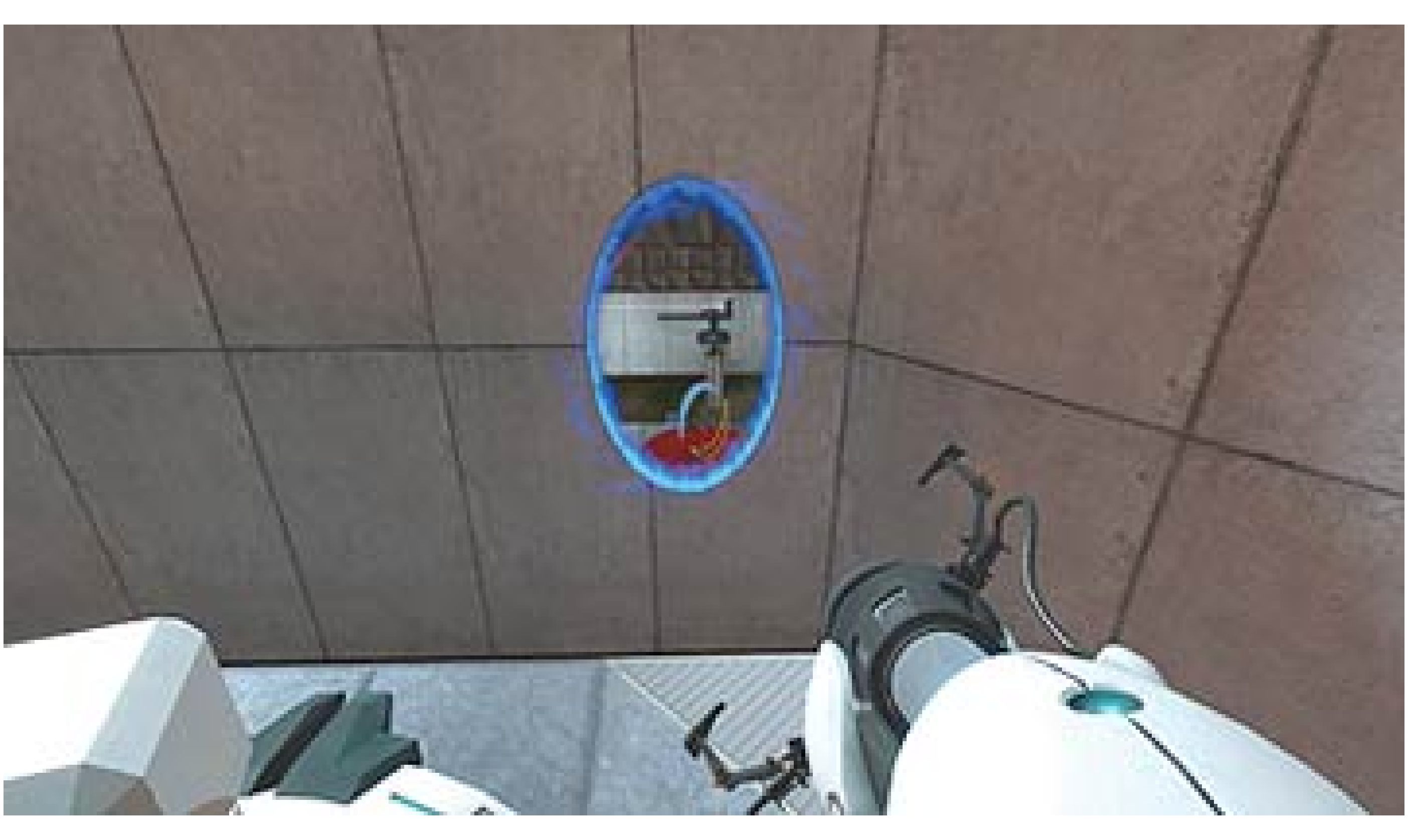


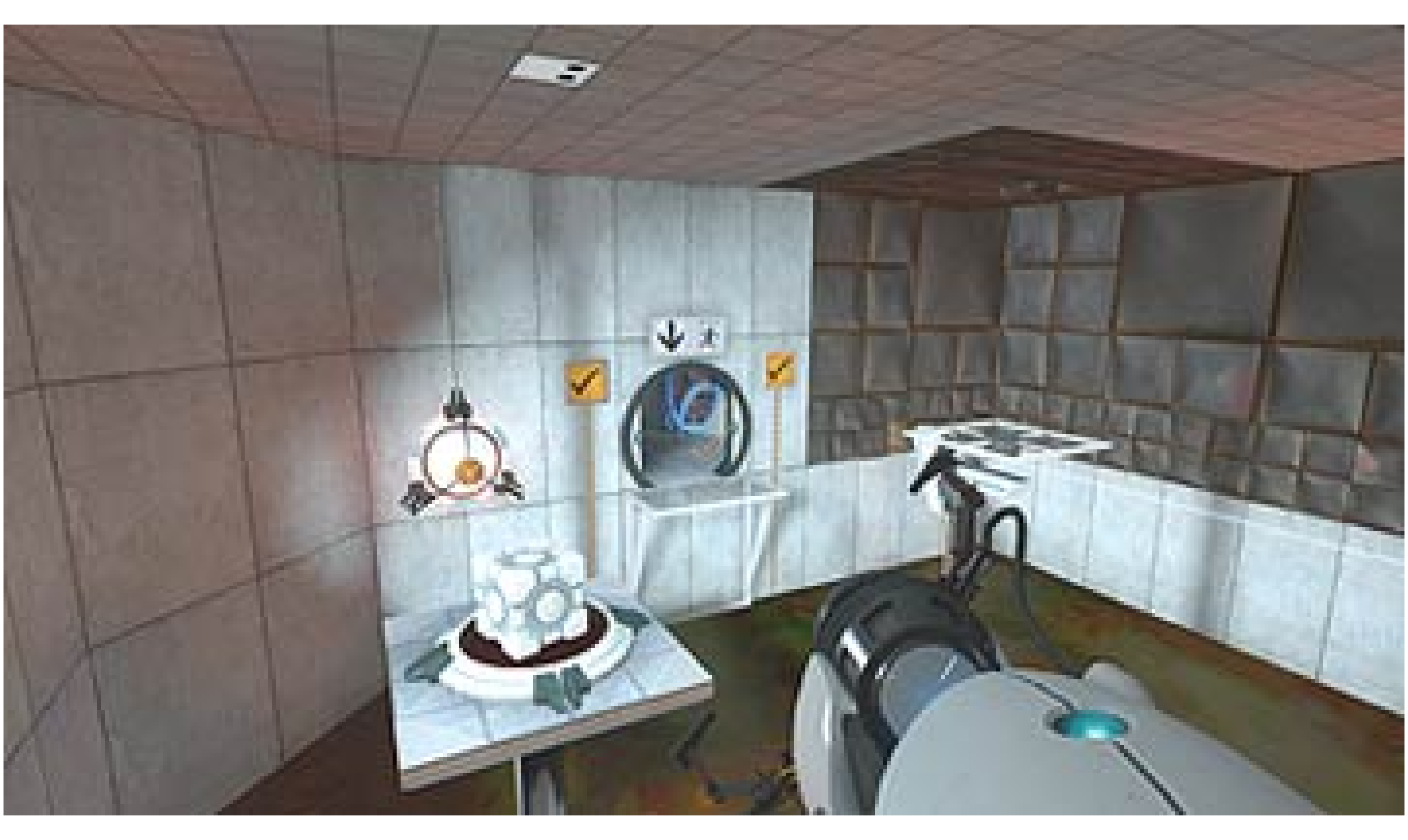
Place your first portal on the stretch of portal-friendly surface that's midway through the lift's path, and jump into your second portal when you can see it below you. Pick up the Weighted Storage Cube, wait until the lift is at the end of its line, and leap across, Cube in tow, to the mesh ledge in front of the exit's blast doors. Be sure to give yourself enough clearance to make the jump.



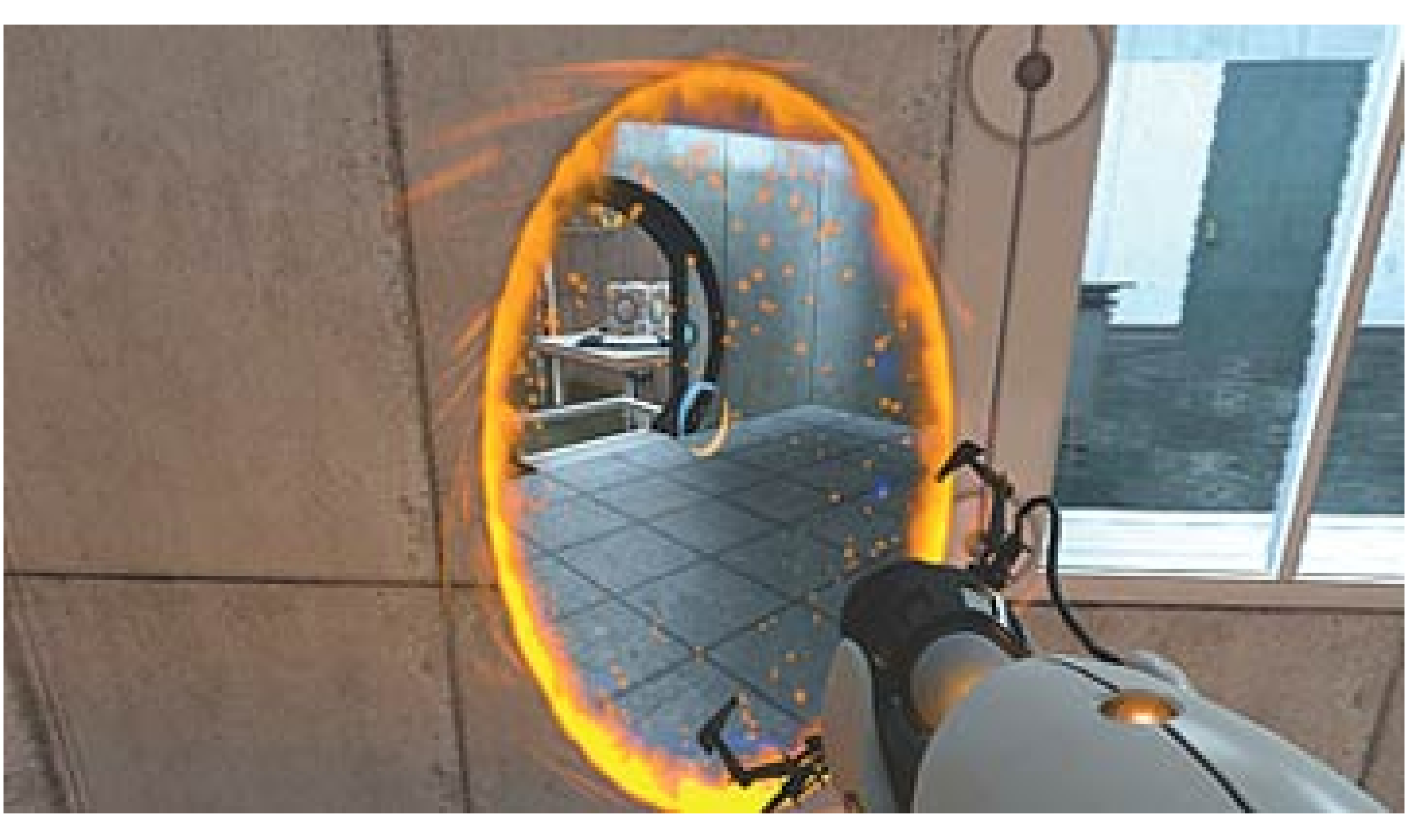


Now comes the tricky part: Leap to the elevated platform that's closest to you (that is, the shorter of the two) from the blast doors' ledge, and don't forget the Cube. It may take a few tries to figure how much clearance you need, so it helps to quicksave your game on the ledge. Once you make it, lay the box on the button and place your first portal behind the taller elevated platform. Now hop onto it through your second portal. Stand on the red button.





With the blast doors open, aim your first portal on the surface behind them and run through your second portal. Congratulations! You've just completed Test Chamber 13 on advanced difficulty!

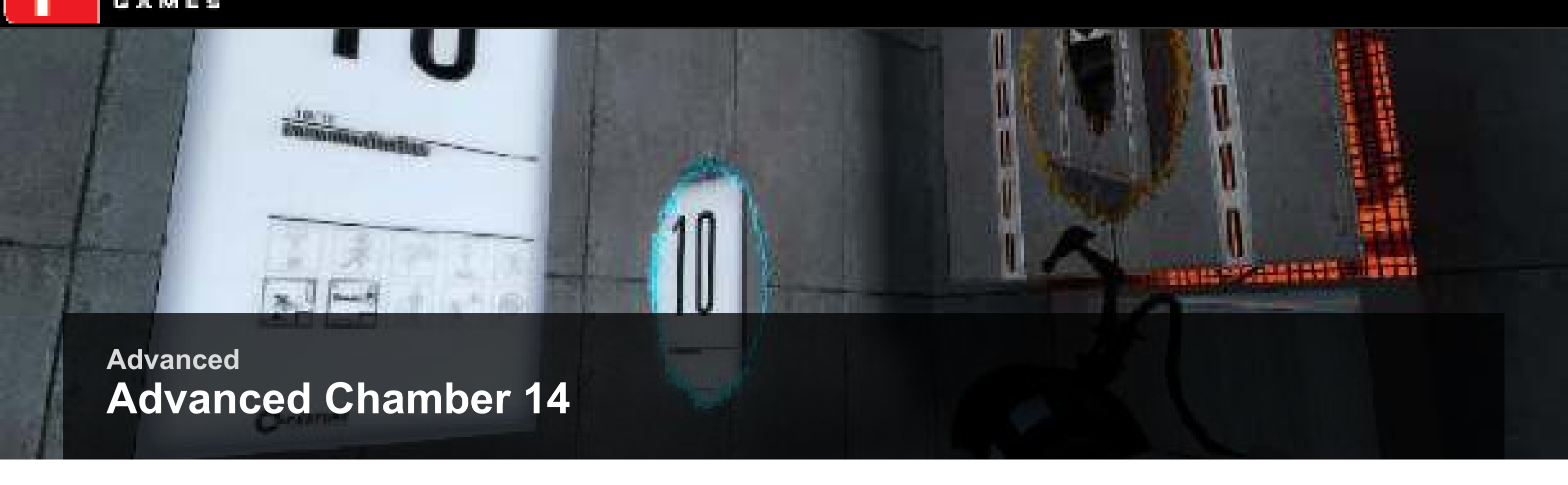


Note

Portal Challenges become available after you've completed the game, and they allow you to tackle Test Chambers 13 through 18 with a host of daunting restrictions. There are three types:

- **Portals:** Use the fewest portals possible to complete a Test Chamber.
- **Steps:** Take the fewest steps possible when completing a Test Chamber.
- **Time:** Complete a Test Chamber as quickly as possible.

While these challenges are strictly for the hardest of the hard core, we've provided strategies straight from the creators themselves to give you a boost. Apart from practice, discipline, dexterity, and timing, this is the most significant advantage you could hope for!

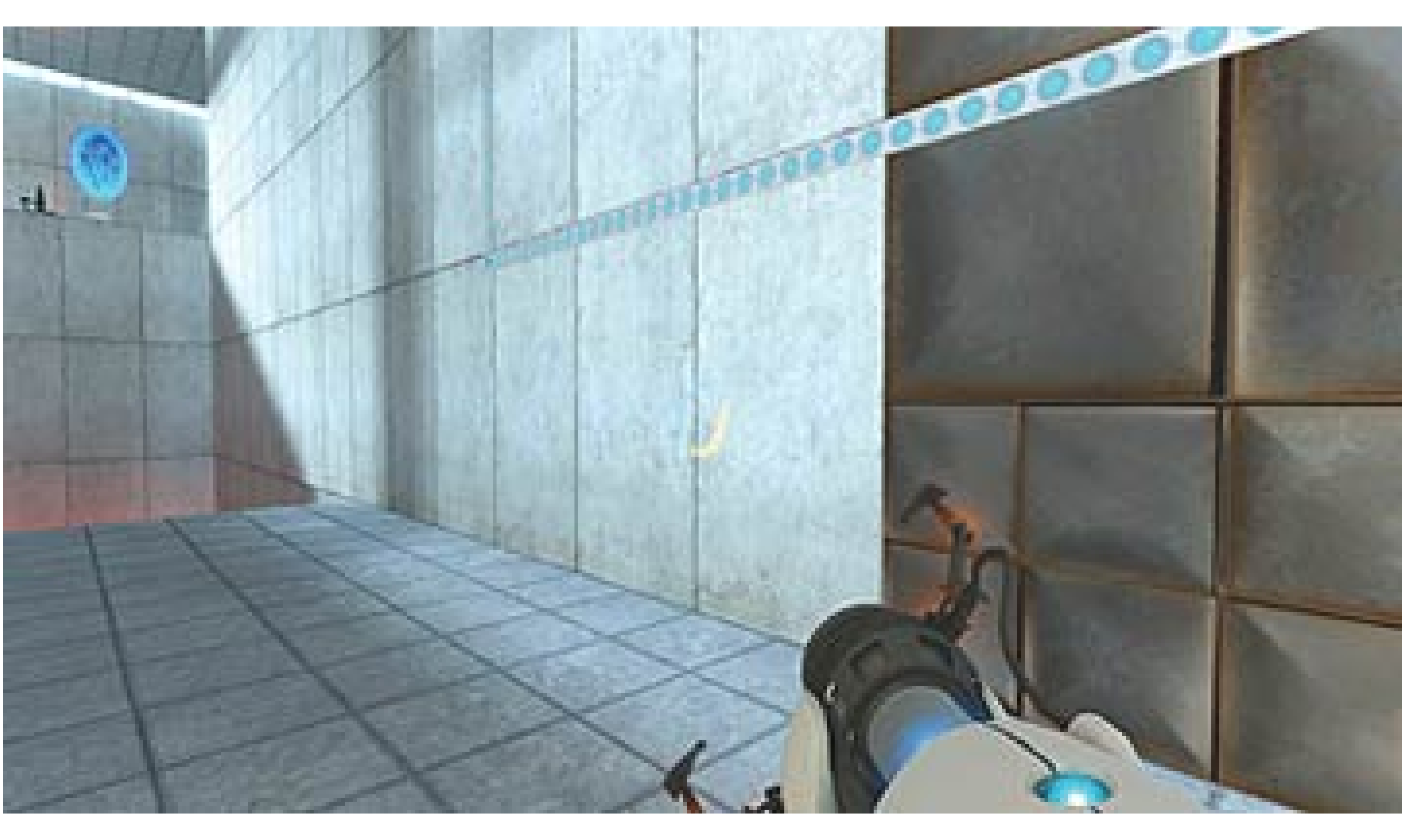


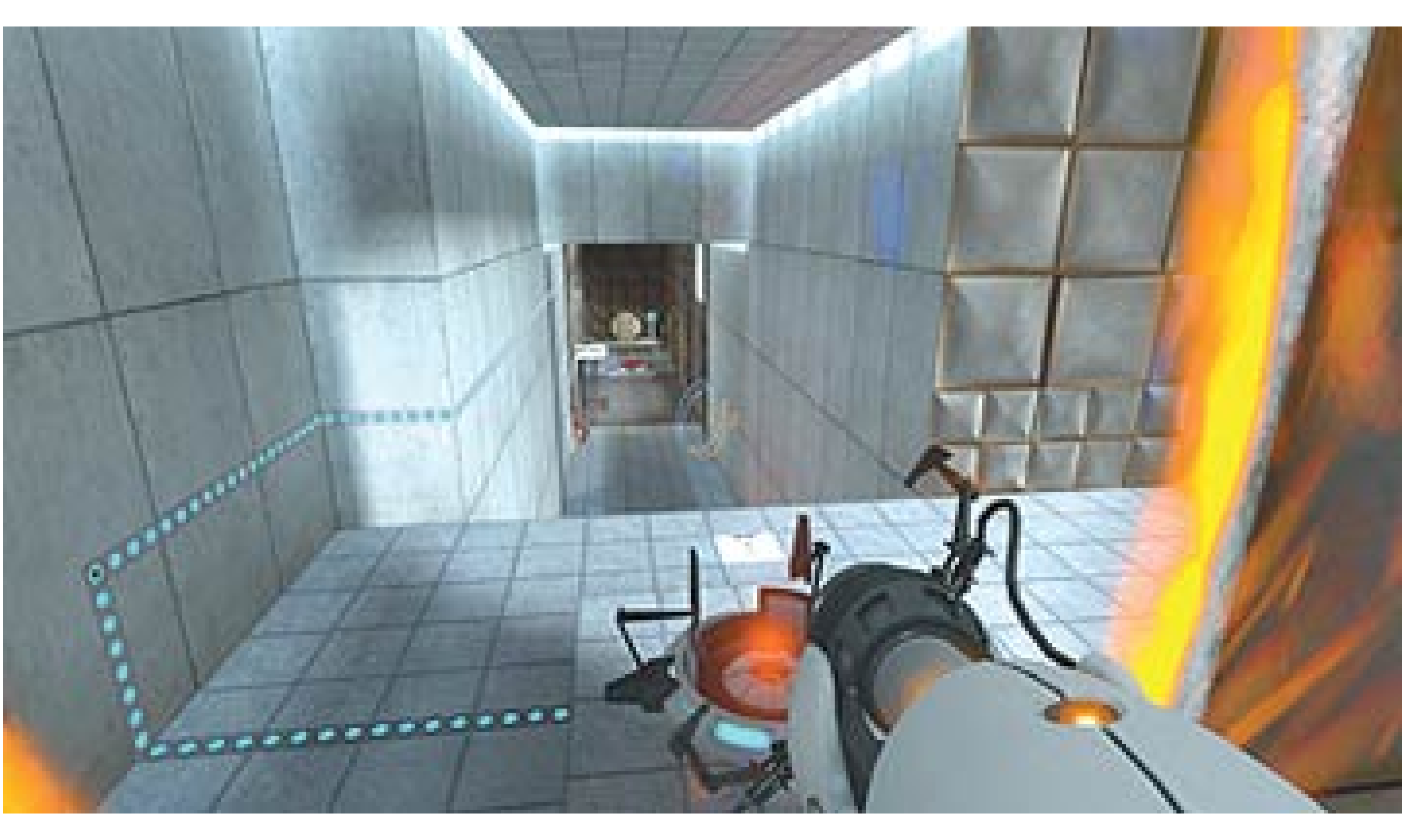
Advanced

Advanced Chamber 14

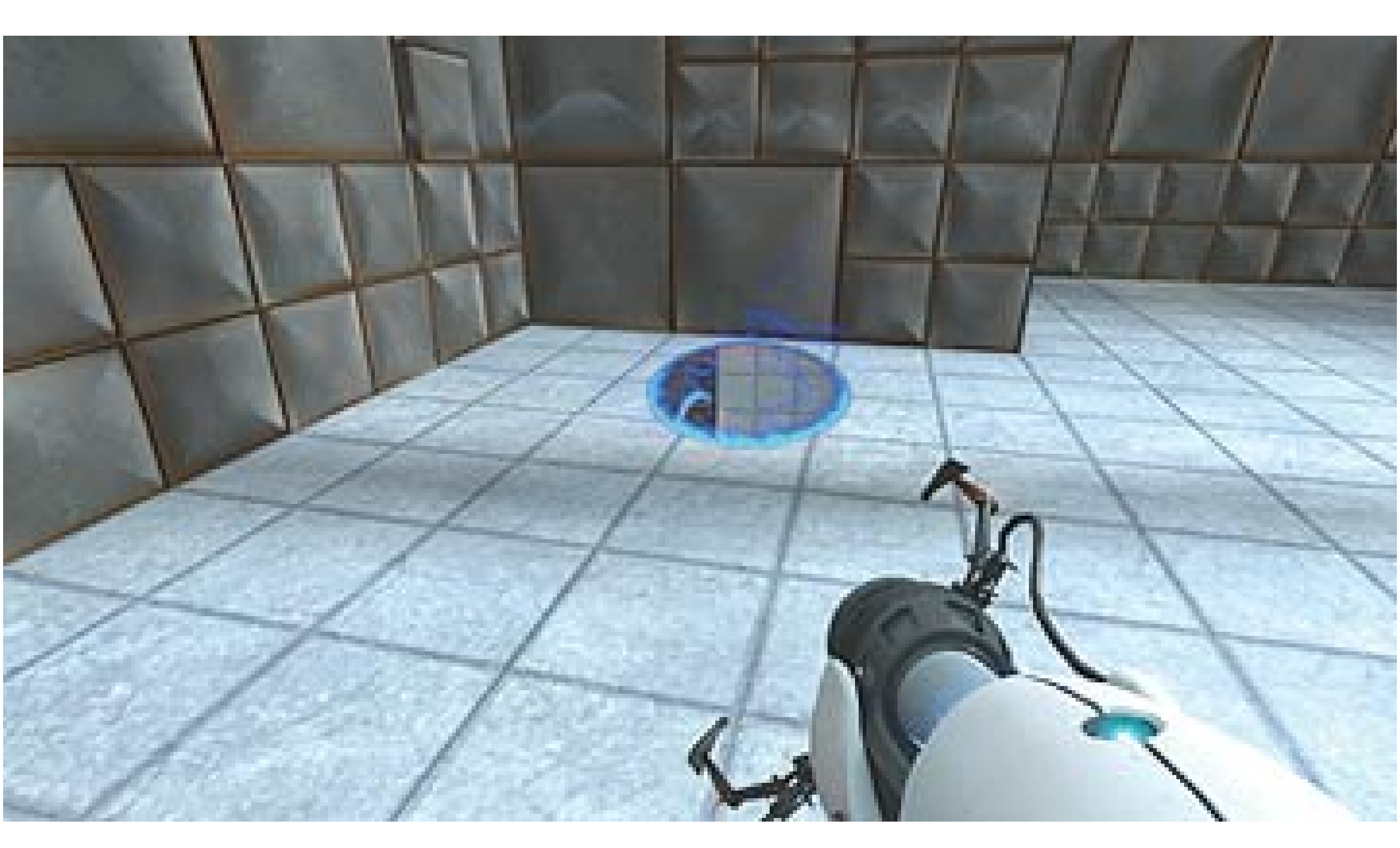
Note

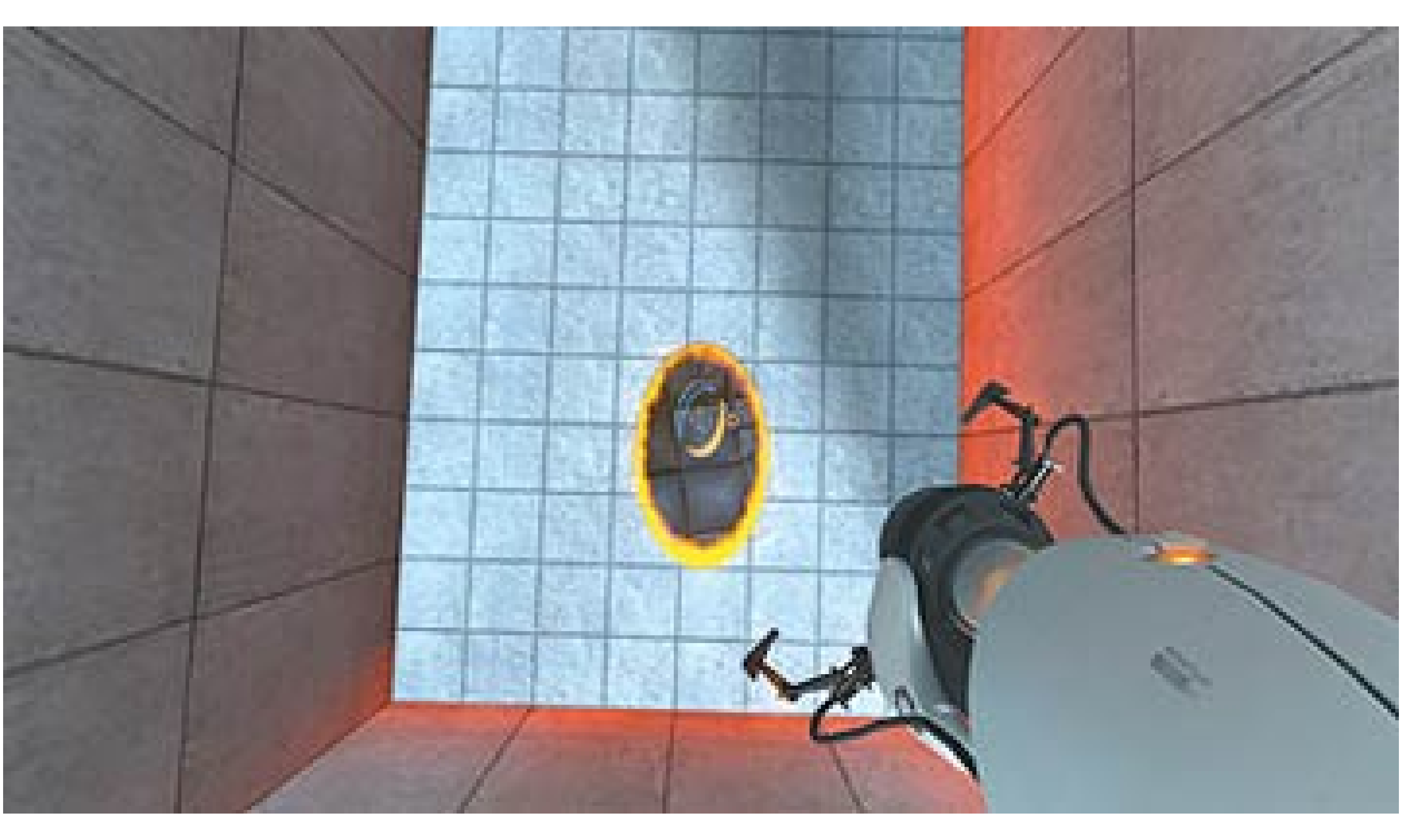
Advanced Chambers are modified versions of Test Chambers 13 through 18 that become available after you've completed the game. They've been tweaked to be much more difficult than their normal counterparts, so pay heed to the precise strategies provided here!

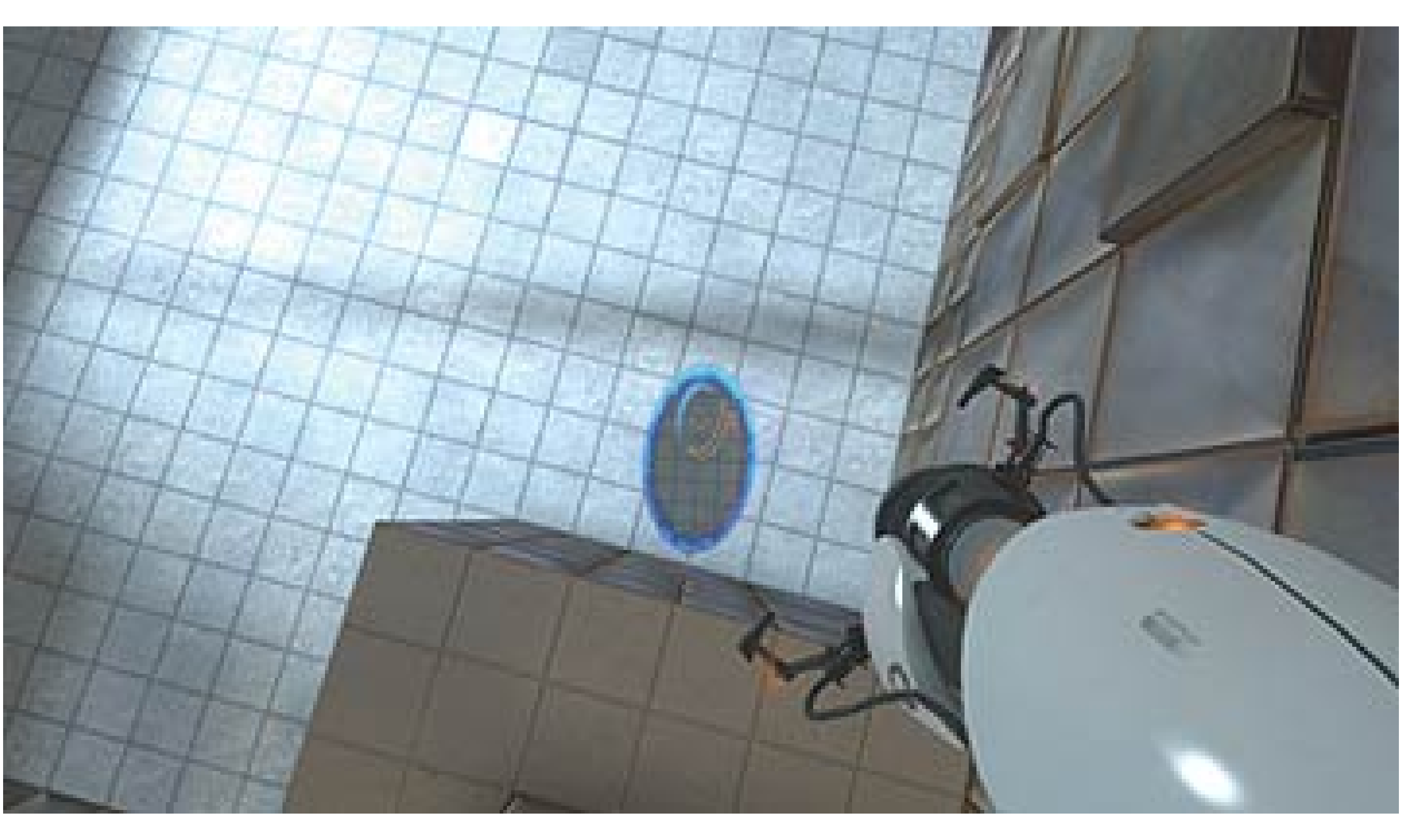




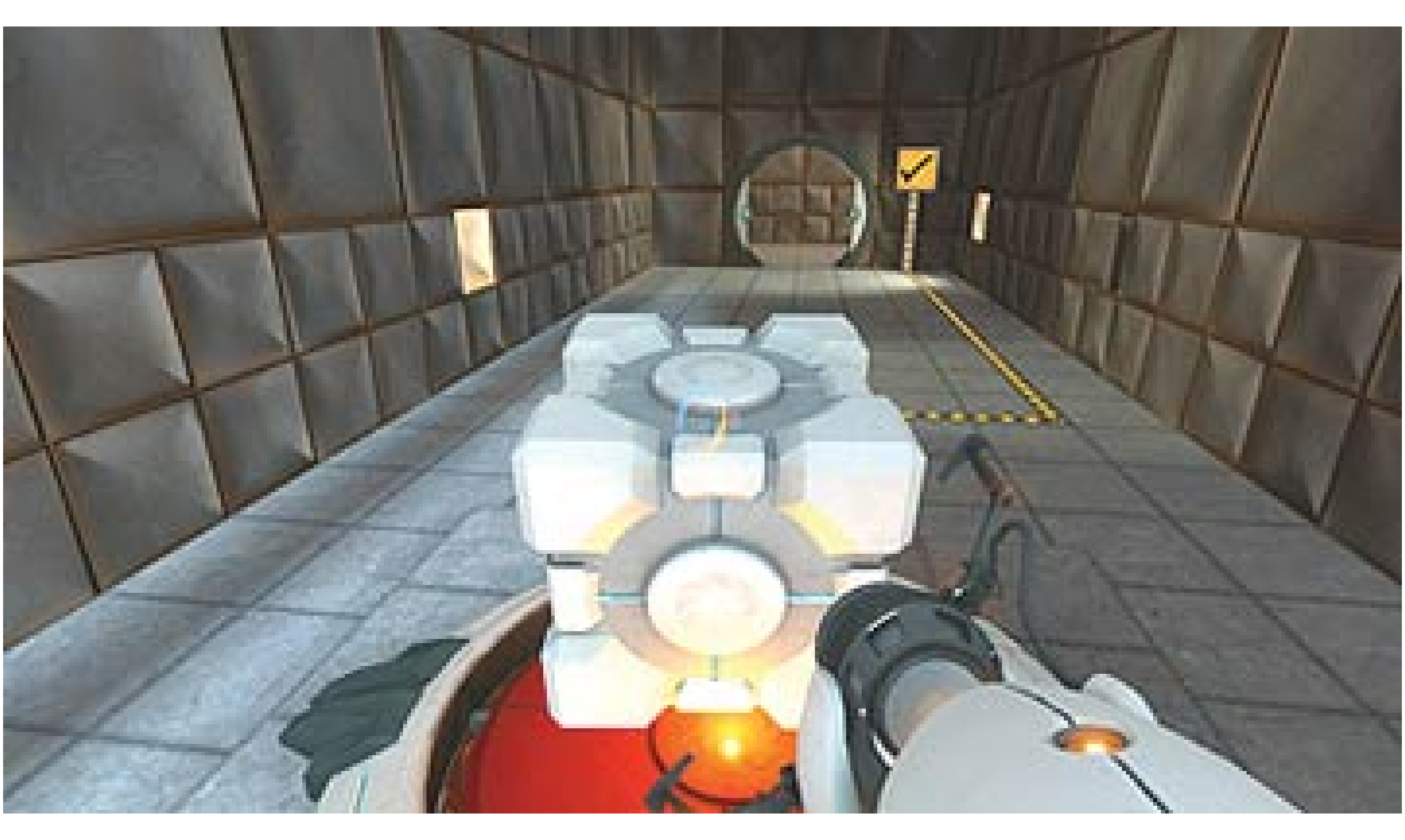
The advanced version of Test Chamber 14 starts out the same: Simply walk up the stairs to your left after you enter the first room, or portal to it if you're in a hurry. The fun begins now.

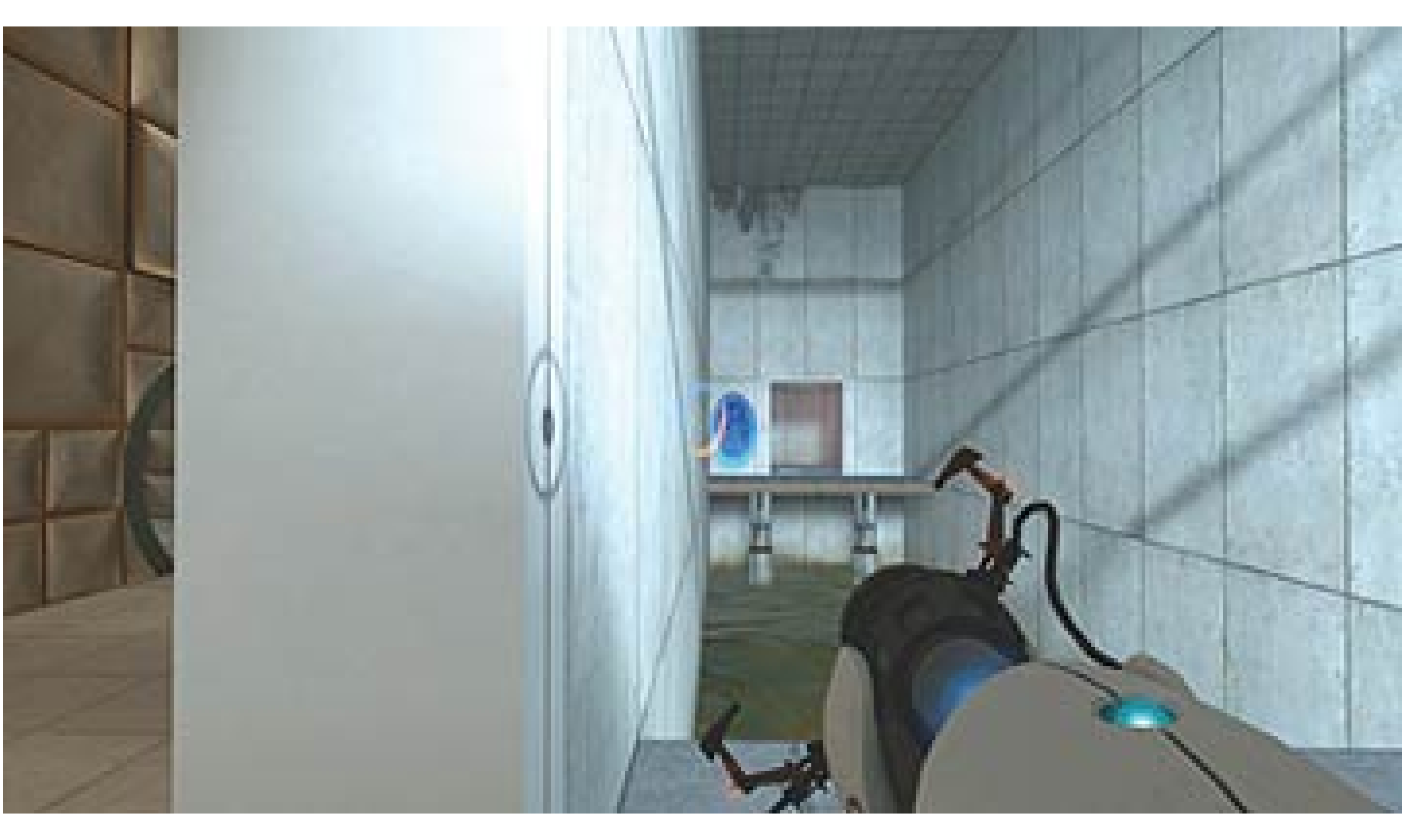




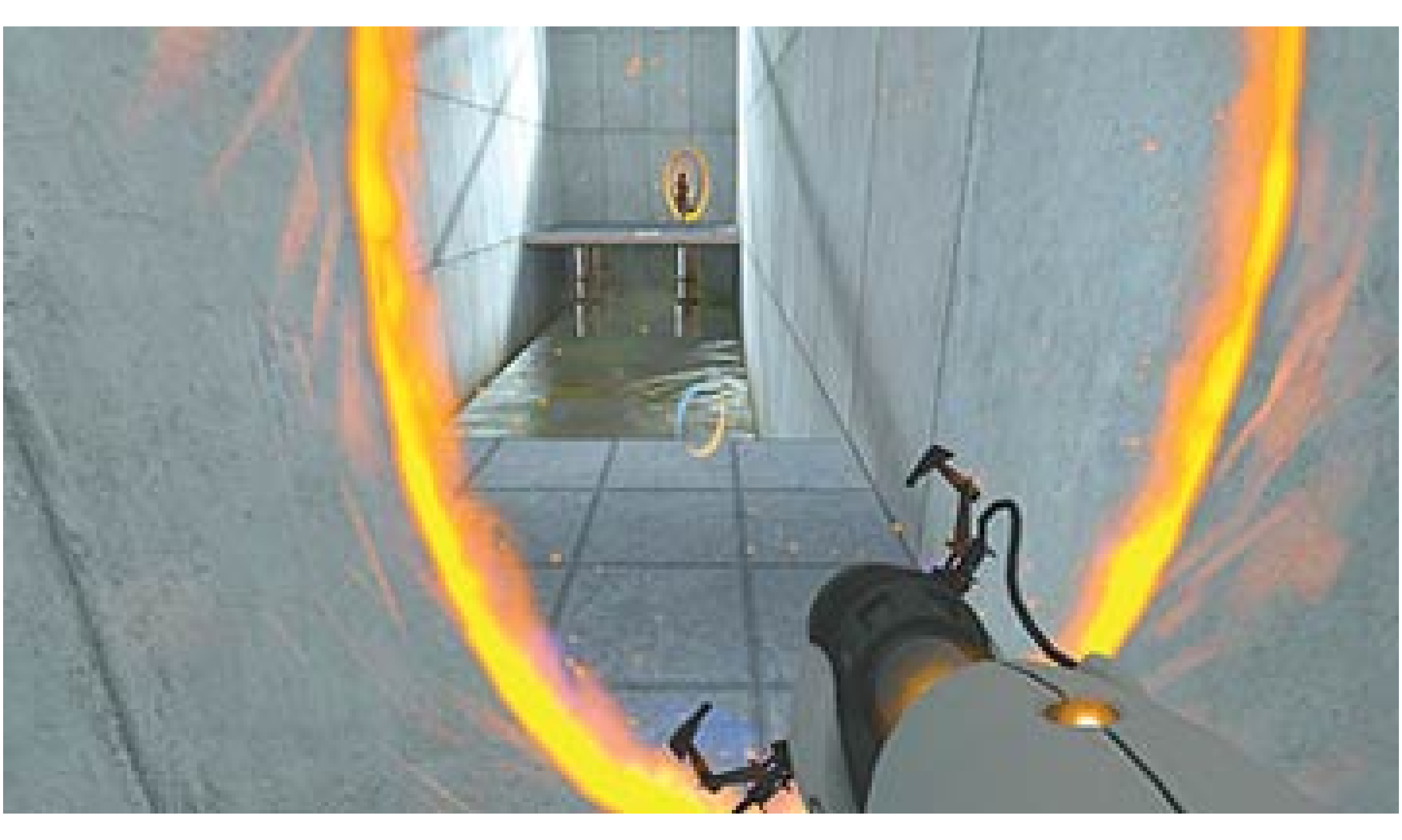


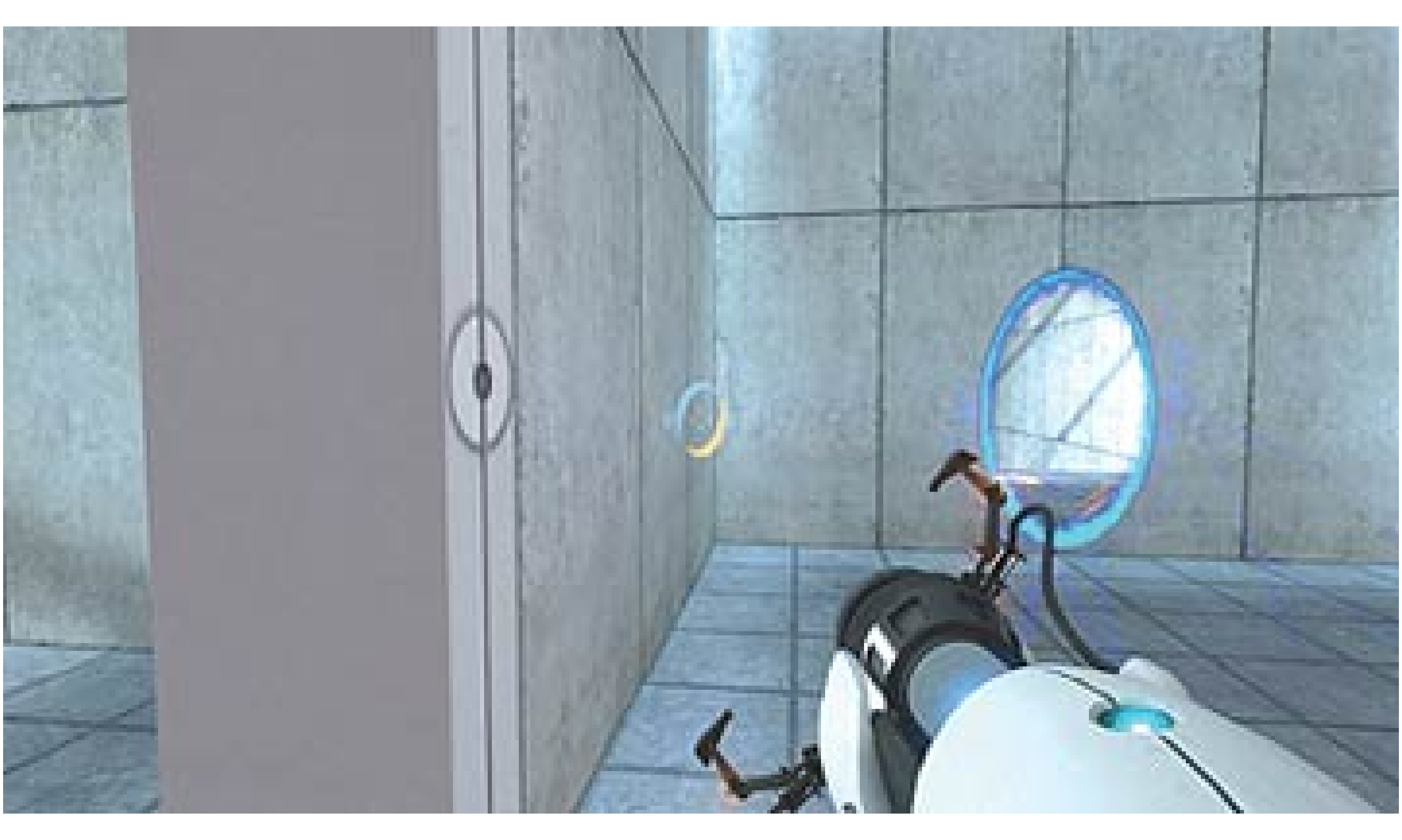
Notice that you can't place portals on the surface opposite the Weighted Storage Cube. Fortunately, there's a much more fun way to get up to the ledge. Place your first portal at the foot of the Cube's ledge, and your second on the bottom of the pit that the stairs create when they retract. Jump through your second portal, and revel as your downward momentum propels you upward onto the Cube's ledge when you emerge through your first portal. This technique is called "Floor-to-Floor," in case you're taking notes. Grab the Cube, and run back to the first room.



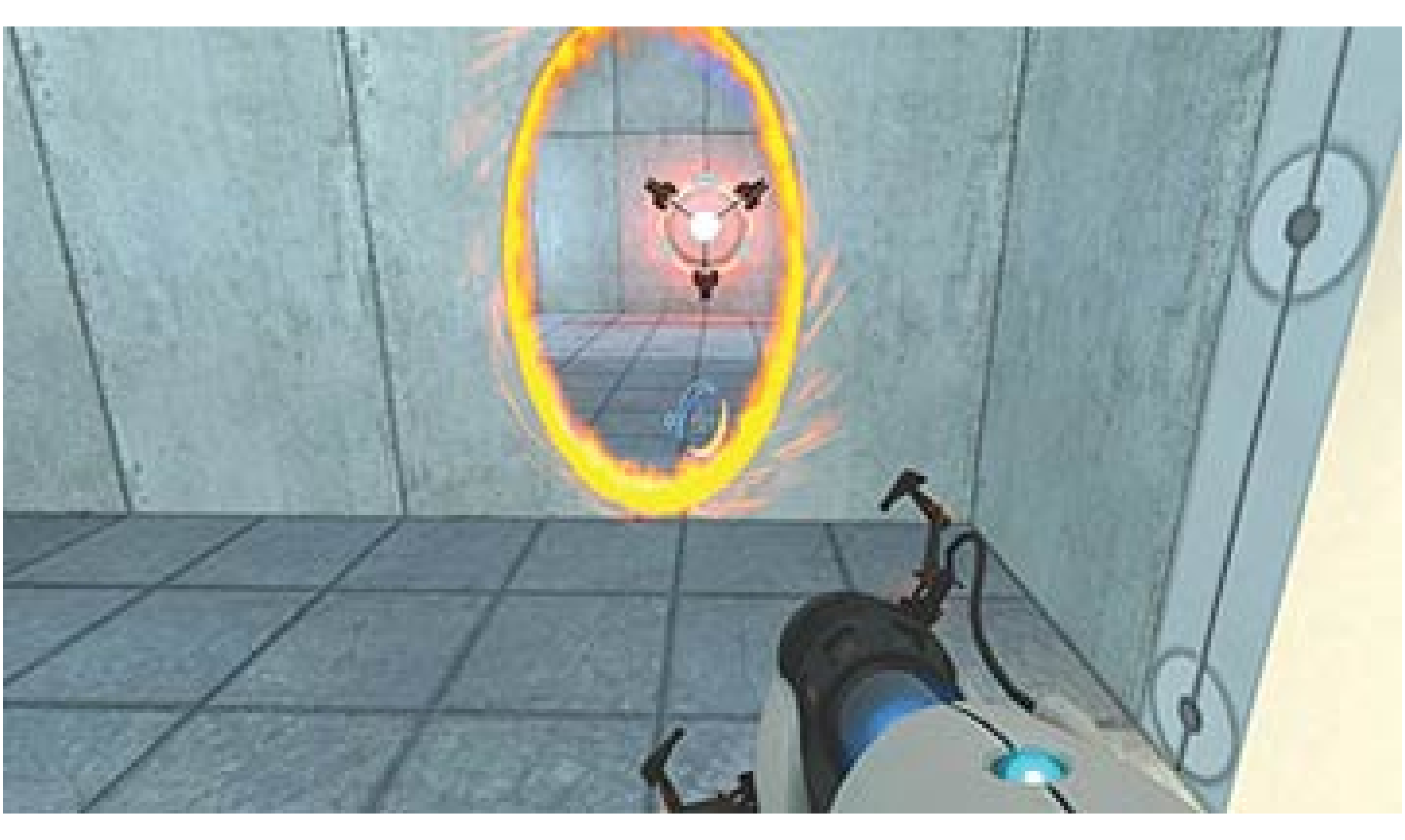


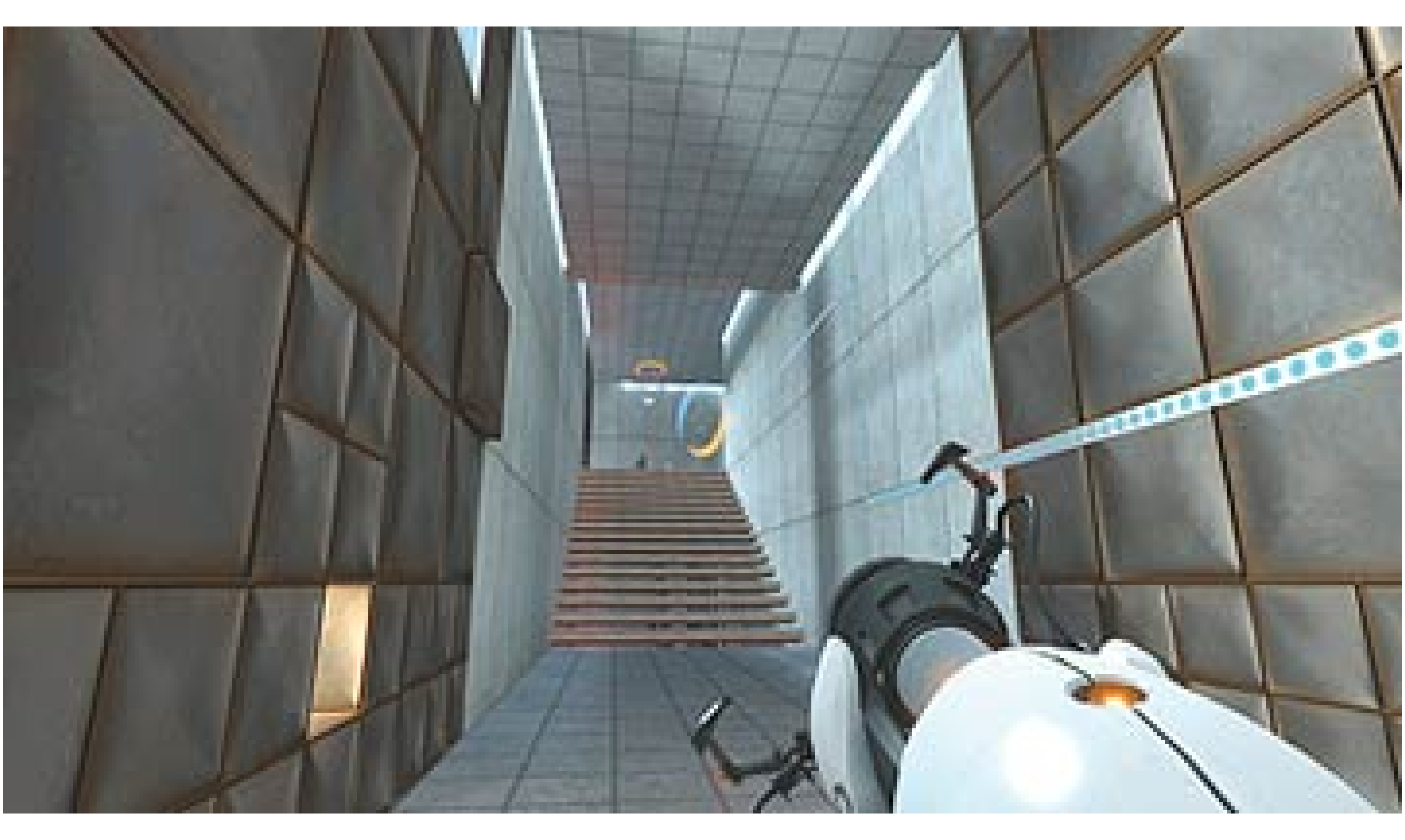
Place the Cube on the red button and enter the blast doors. If you remember the normal version of Test Chamber 14, you know there was a series of platforms in the goo-filled hallway beyond the doors. This isn't so in advanced. Cross the hallway as you did in the normal version: Place your first portal at the end of the hall and your second opposite it on your end. It's important that you leave this second portal right where it is—it's going to be your only way back after you're done with this hallway. Now, walk through it and enter the Ball Launcher's room, being careful to avoid the energy ball.



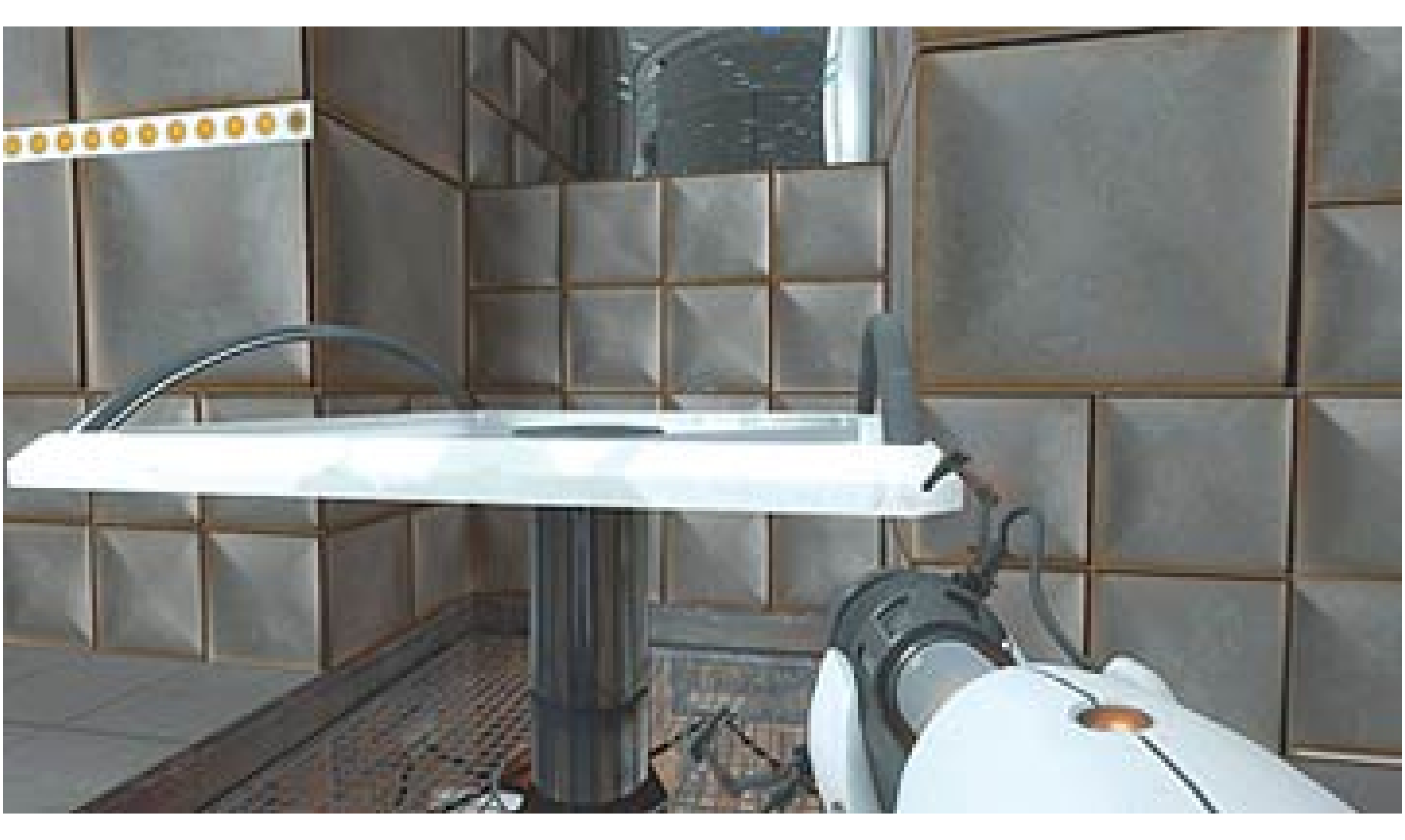


Place your first portal on the charred spot where the ball makes contact with the wall. Since you can't hop on the platforms over the goo to get back to the main chamber (because they don't exist in this advanced version of the map), wait until the energy ball travels through the portal you just placed, and follow it through. You emerge at the portal you placed at the end of the hall.





Hustle back to the Ball Catcher near the Cube's original location. Place your second portal over it, making sure that it isn't the one you placed in the launcher's room. When the Catcher activates the victory lift, you're good to go.



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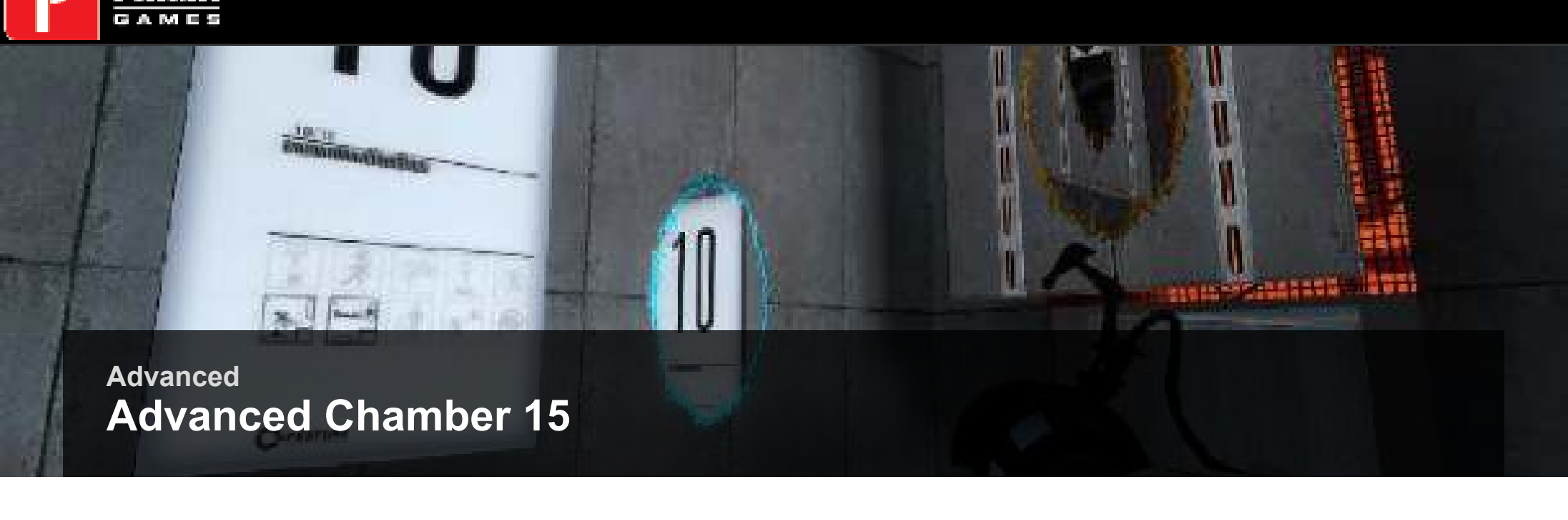
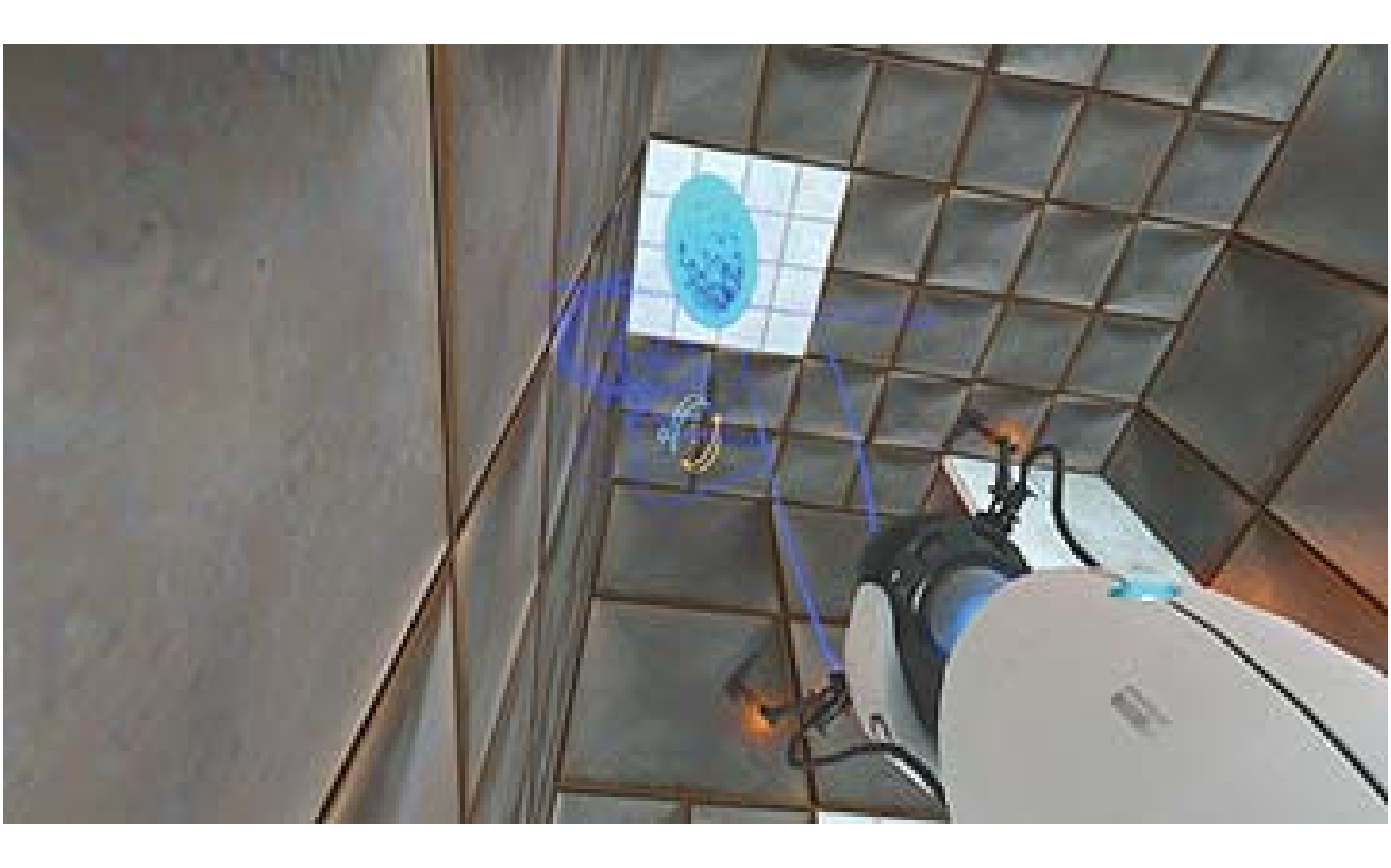


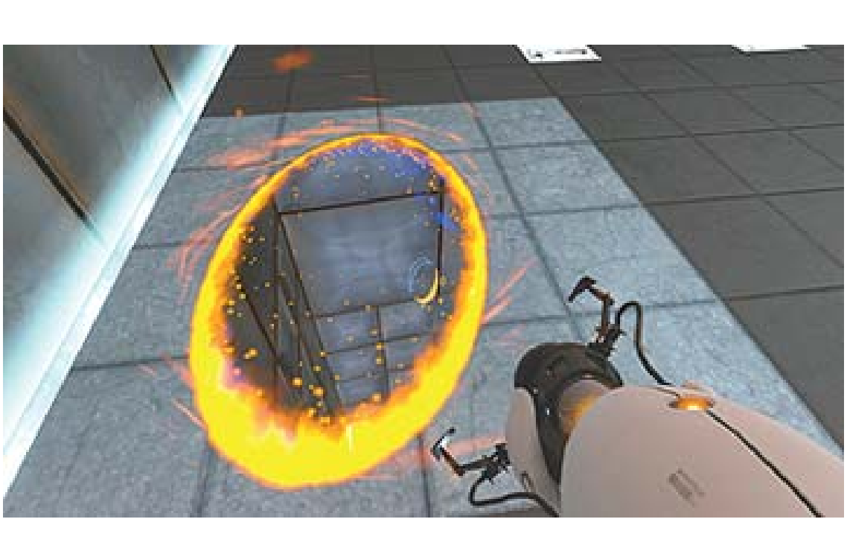
Advanced

Advanced Chamber 15

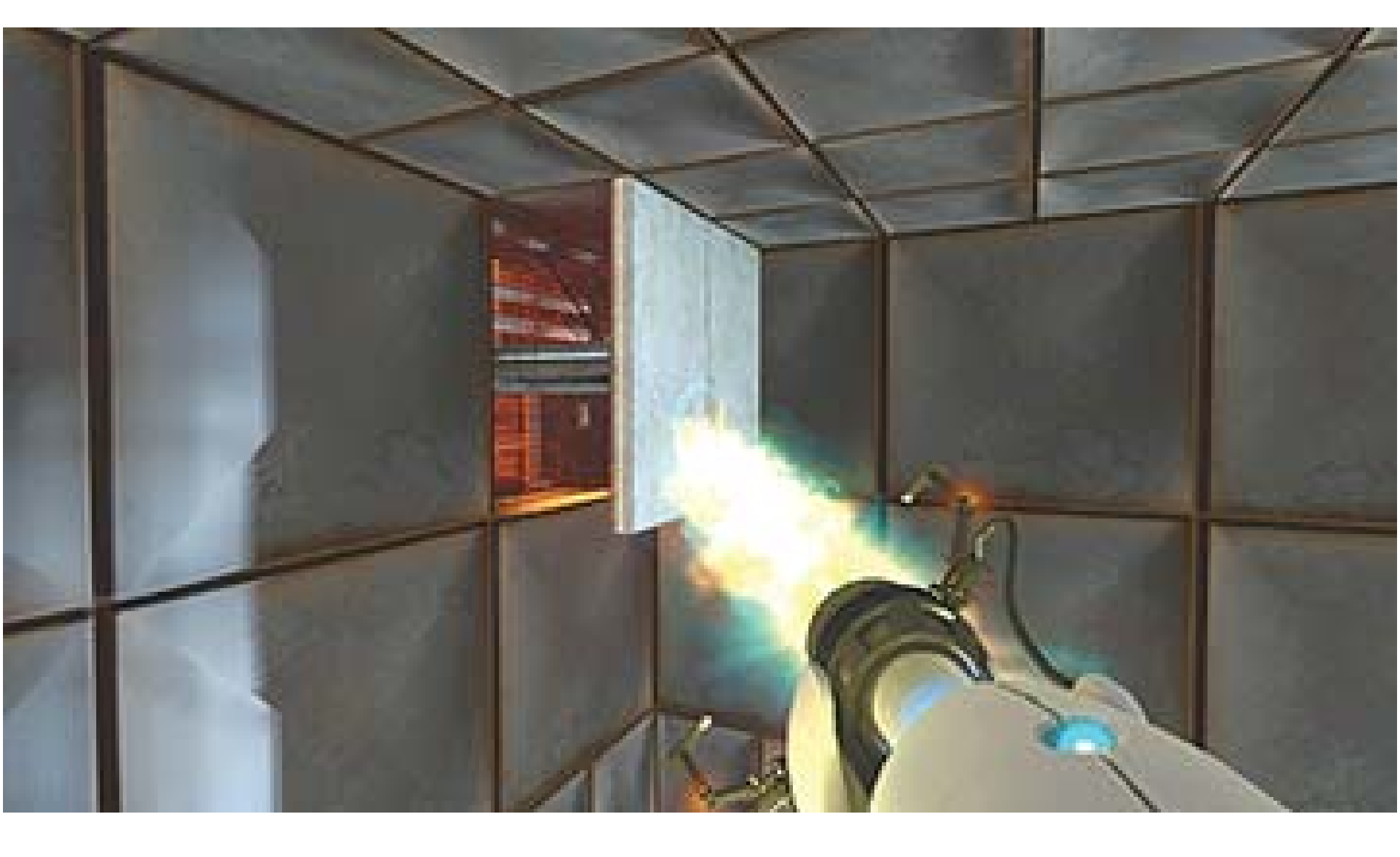
Note

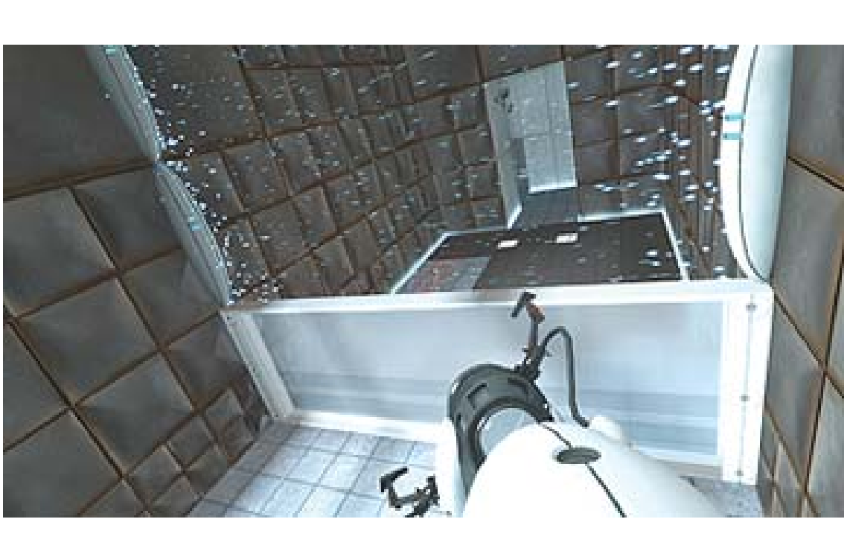
Advanced Chambers are modified versions of Test Chambers 13 through 18 that become available after you've completed the game. They've been tweaked to be much more difficult than their normal counterparts, so pay heed to the precise strategies provided here!



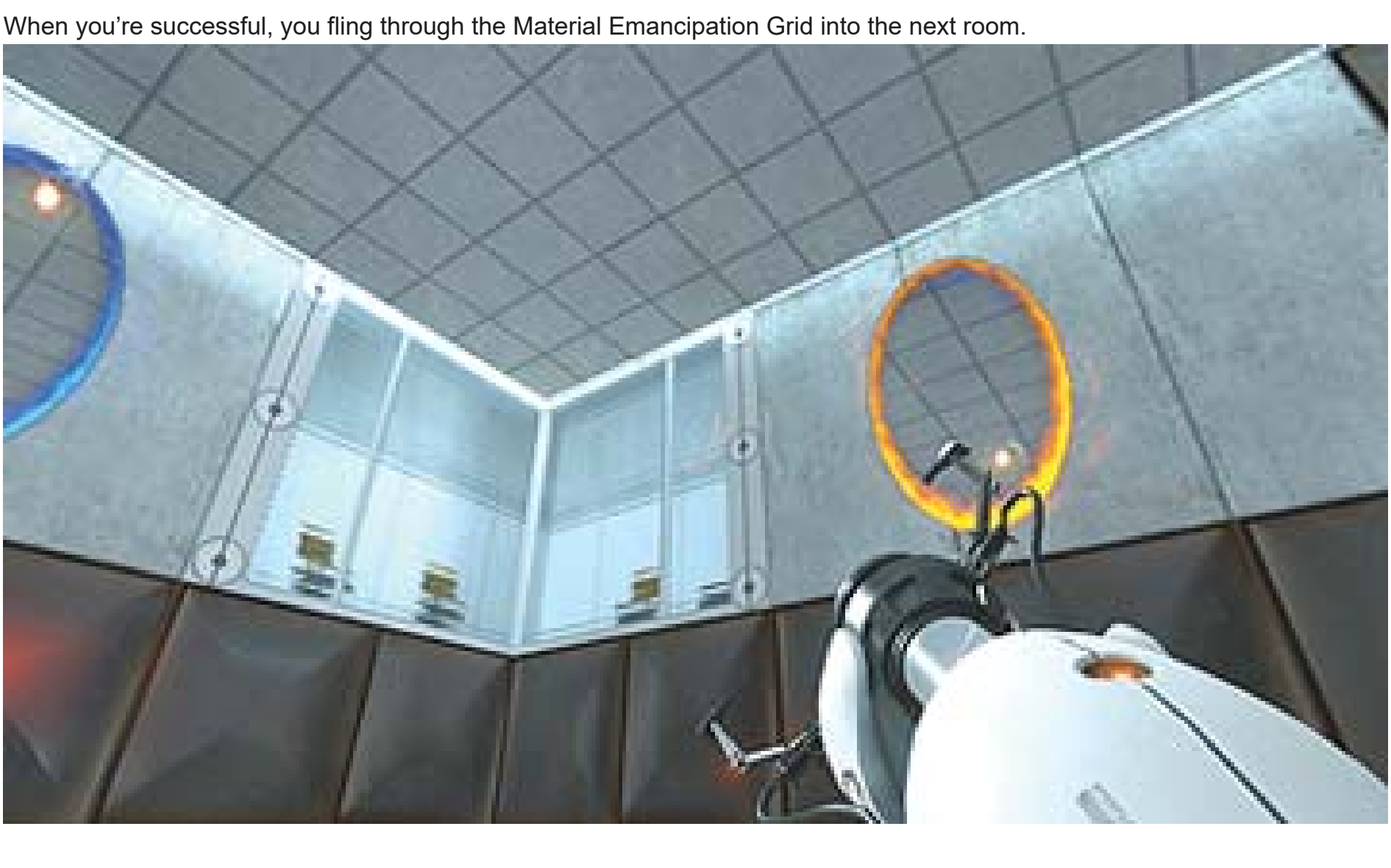


The first room in Test Chamber 15's advanced version has fewer surfaces on which you can place portals. You'll see one on the ground when you enter, and one on the ceiling directly above it. Fire your first portal on the patch on the ceiling and your second on the ground. Before jumping, take note of protruding panel right above the entrance. This is where you aim as you're falling through the infinite portal system you've just created. Jump in, and fire your first portal wildly until you hit the protruding panel—you have all the time in the world.

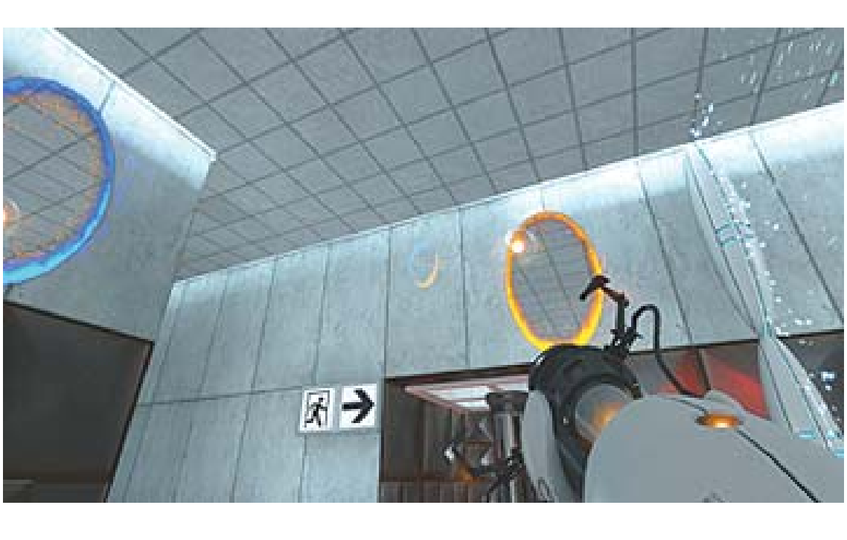




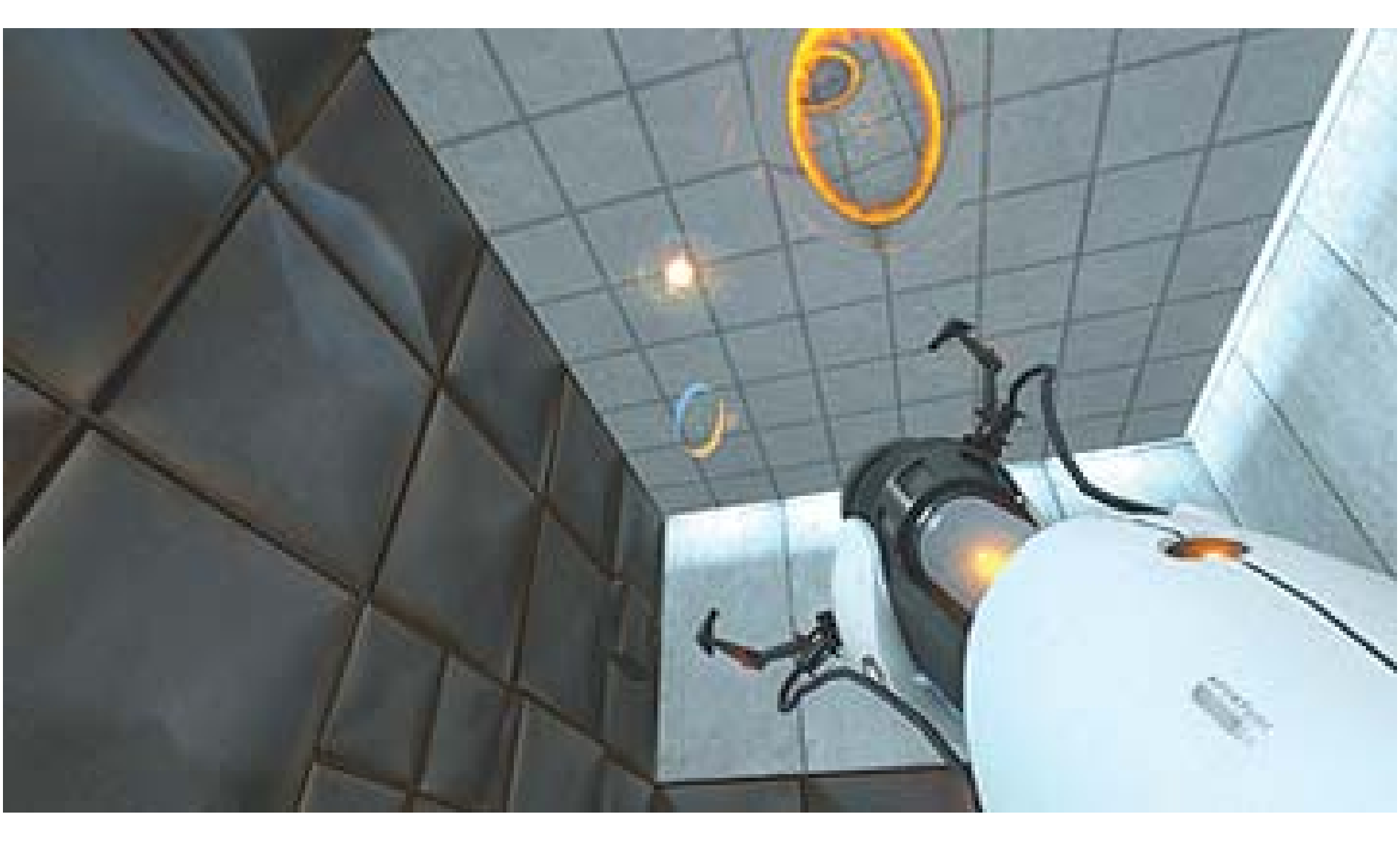
When you're successful, you fling through the Material Emancipation Grid into the next room.



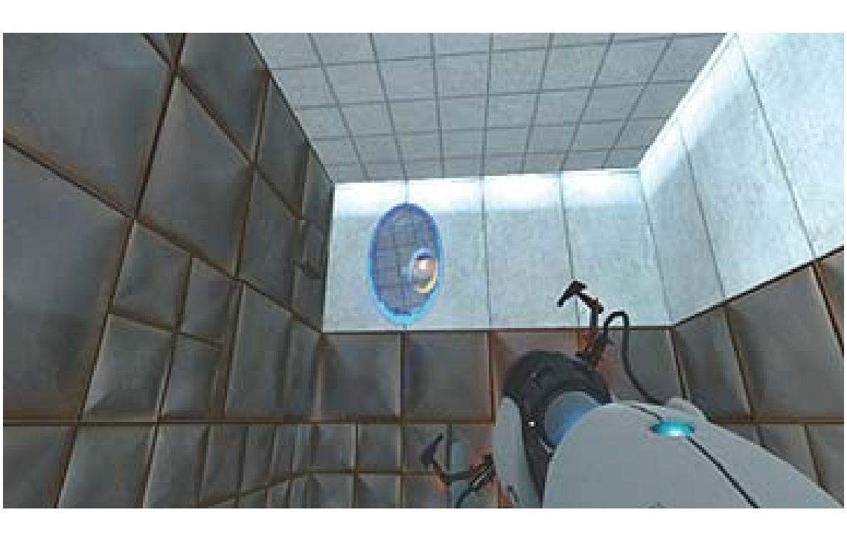
There's an extra Material Emancipation Grid in this next room that wasn't in its normal-mode counterpart—it emanates from the wall that separates the two that you're used to. Solving the Ball Catcher puzzle is a little trickier as a result: Place your first portal on the spot where the ball makes impact, and your second on the wall to the right of it, right beside the observation window. Follow the ball en route through the grid.

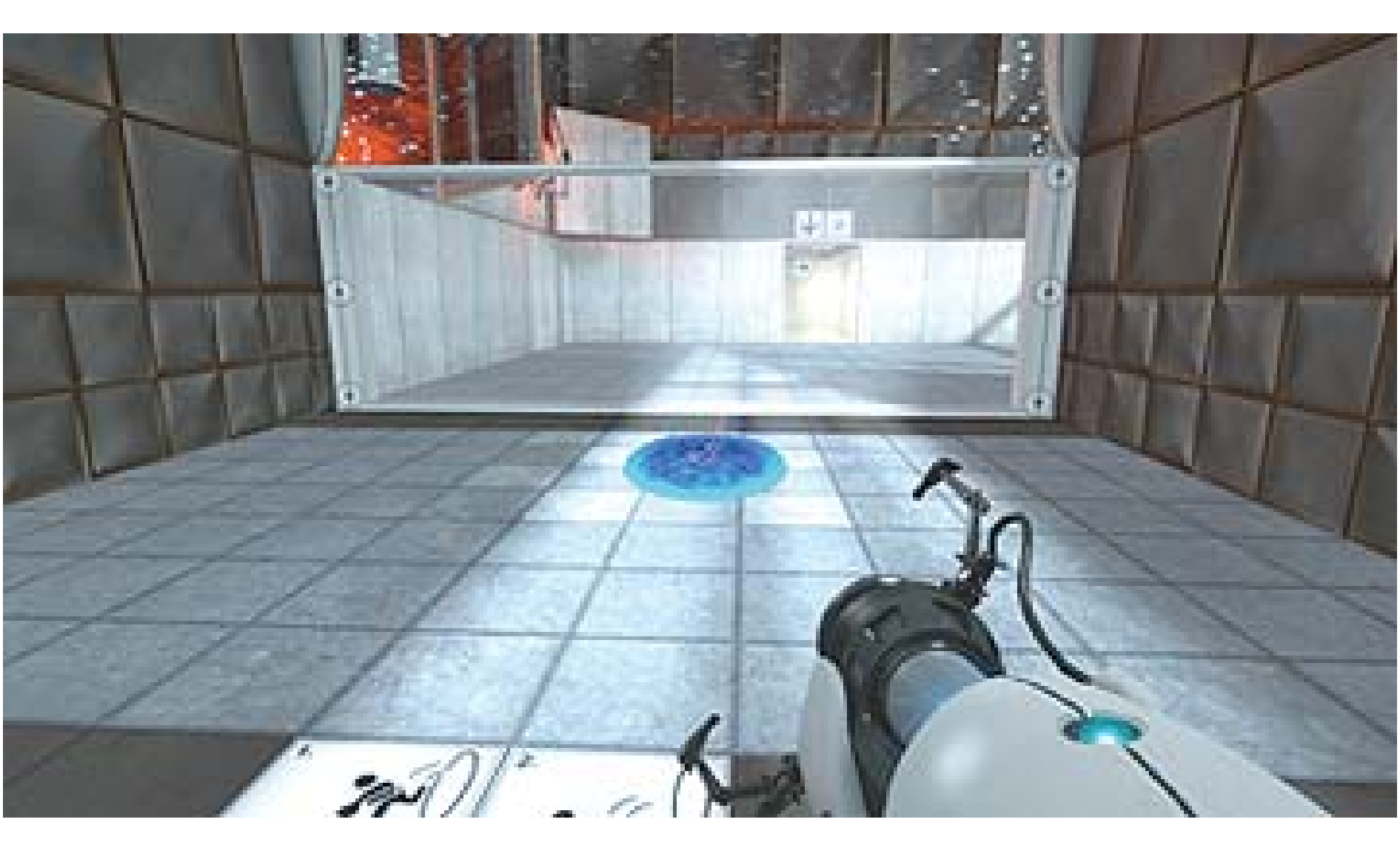


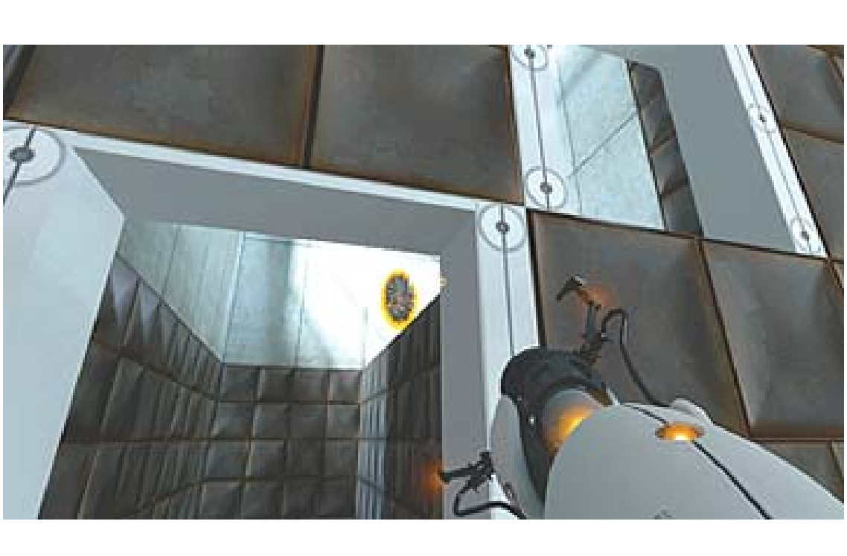
When you pass through the grid, fire your first portal on the wall directly ahead of you, and the second right above the inactive lift. It is now traveling toward the wall adjacent to the Catcher. Follow it behind the grid.



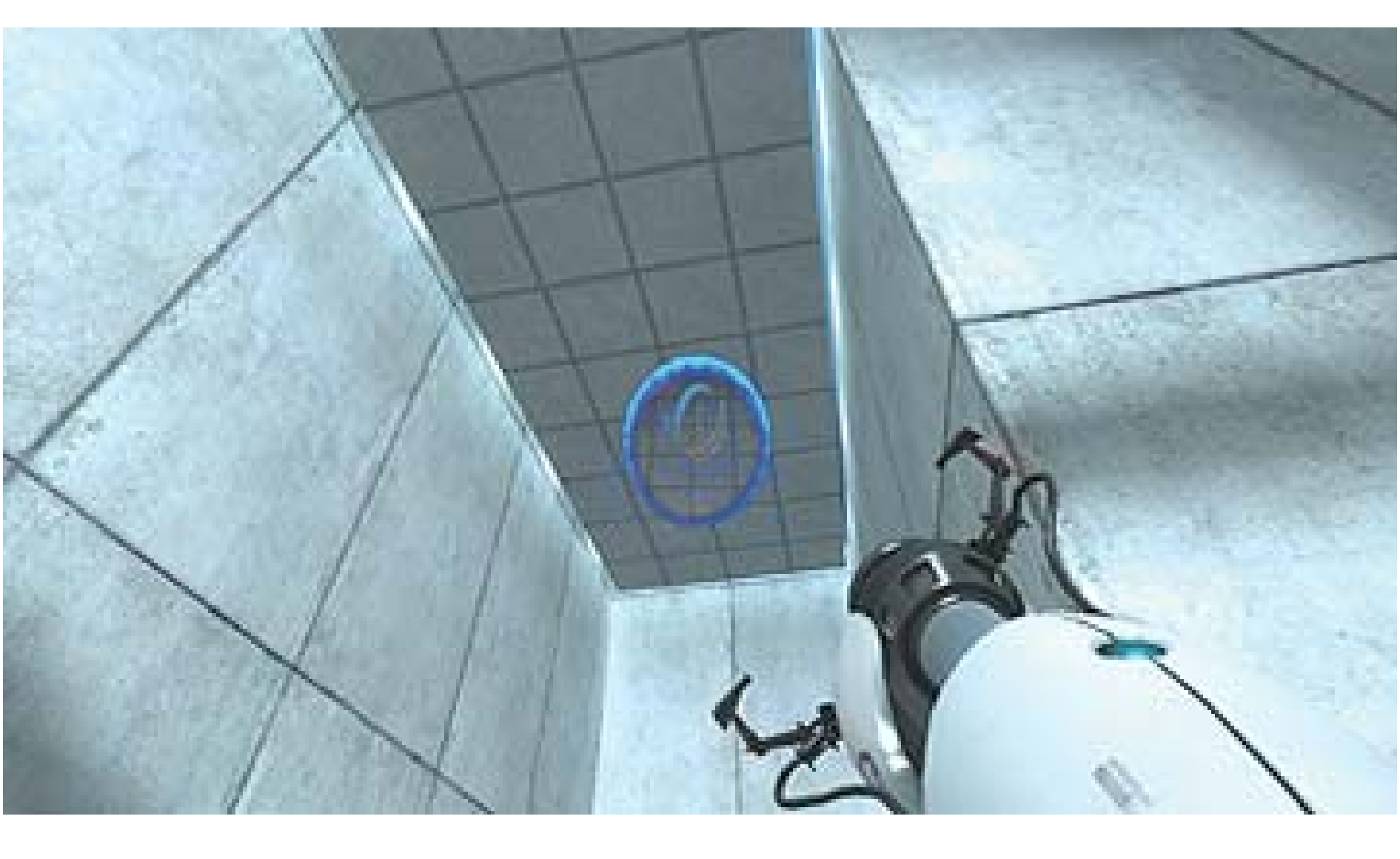
Now place your first portal on the ceiling above the Catcher, and your second on the wall ahead of you. This triggers the Catcher and activates the lift. Exit the room.

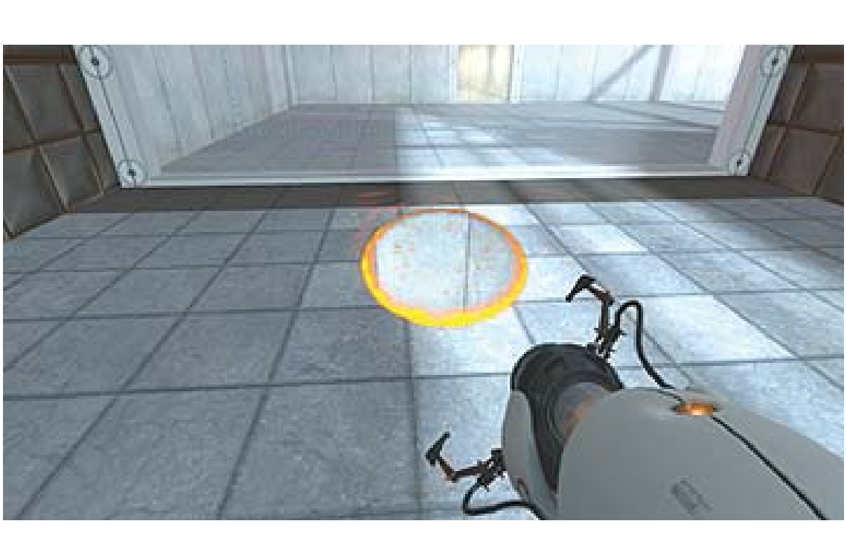




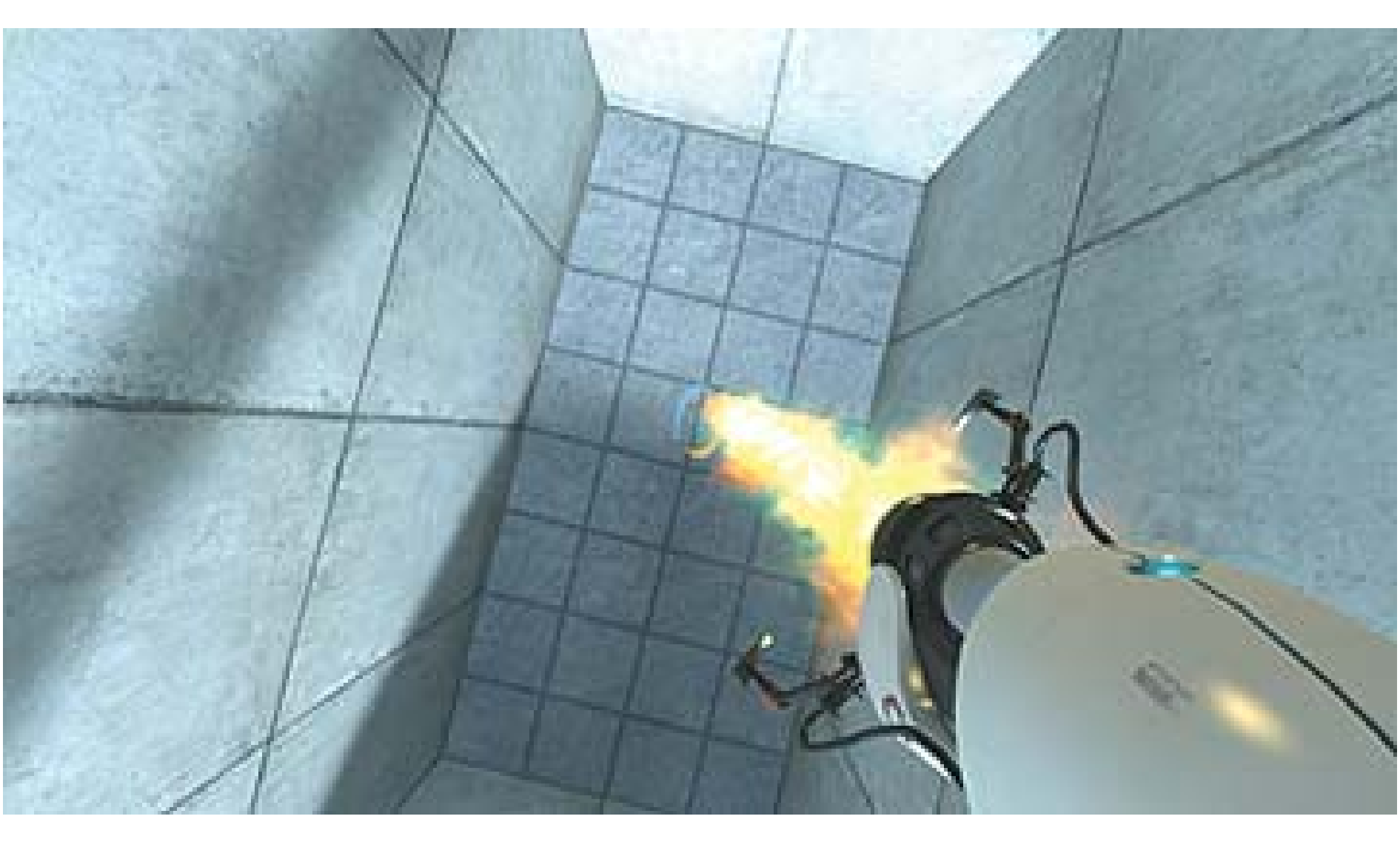


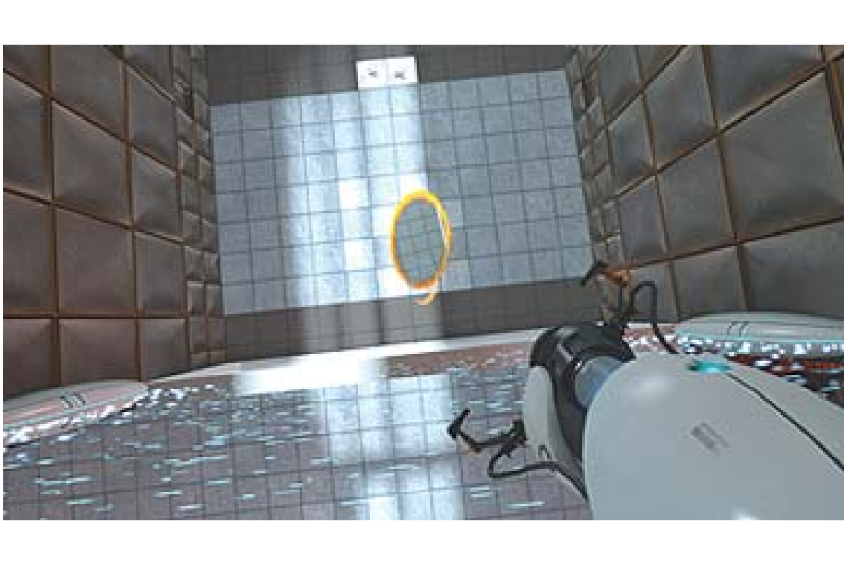
In the next room, place your first portal on the ground near the grid and your second in the alcove to the left of the entrance. There are no steps in that alcove on advanced mode, so you must use portal science. Be sure your second portal is positioned in a place that can get you atop the ledge. Now jump through your first portal.



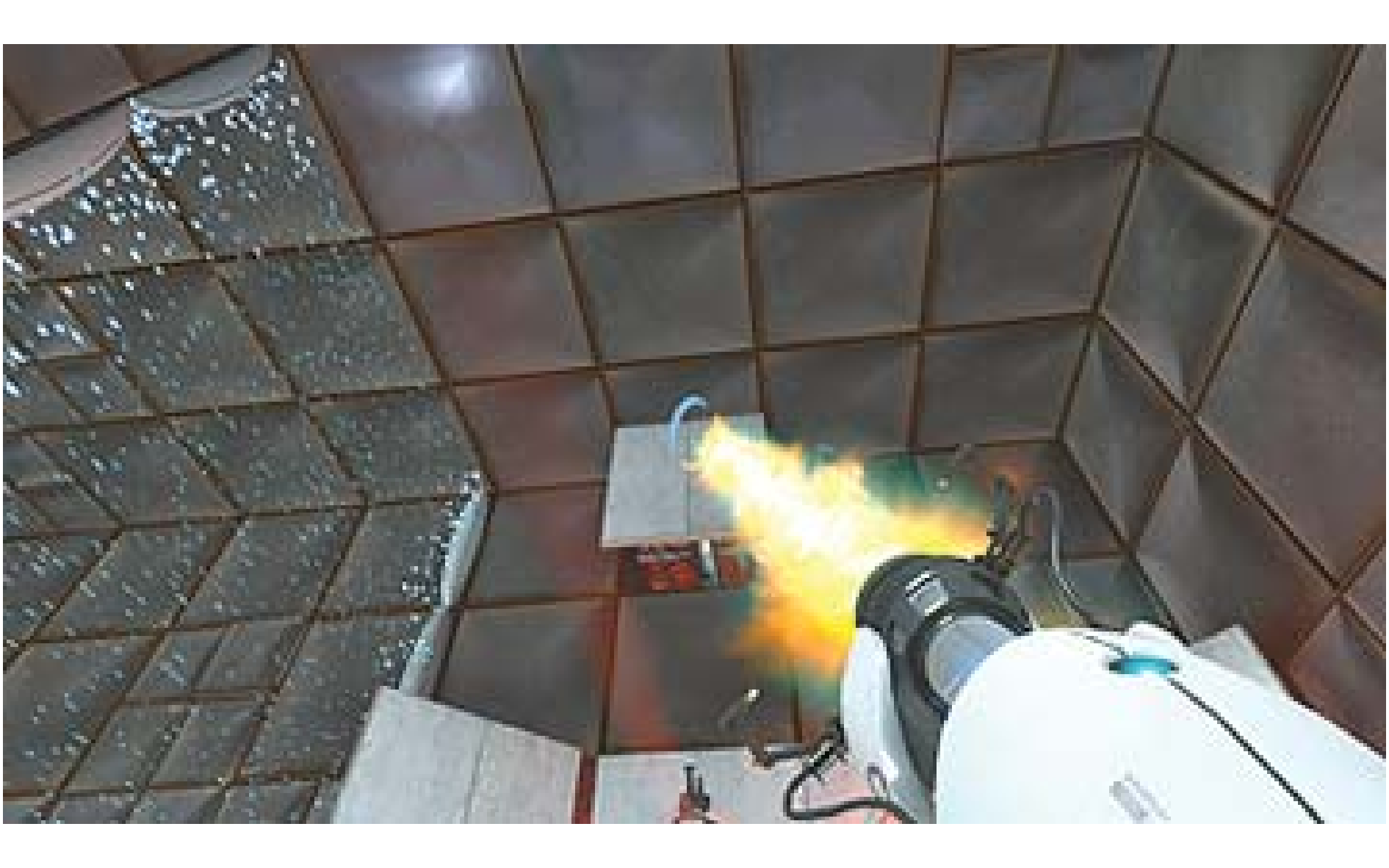


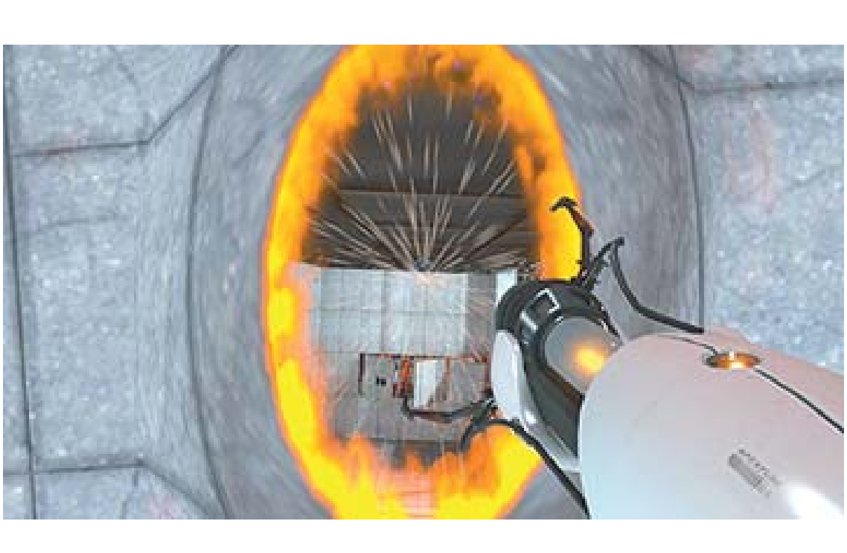
You're now on the ledge. Position your first portal on the ceiling above the small pit, then jump out of the alcove and place your second portal at the base of the grid. You're about to do some fancy floor-jumping.

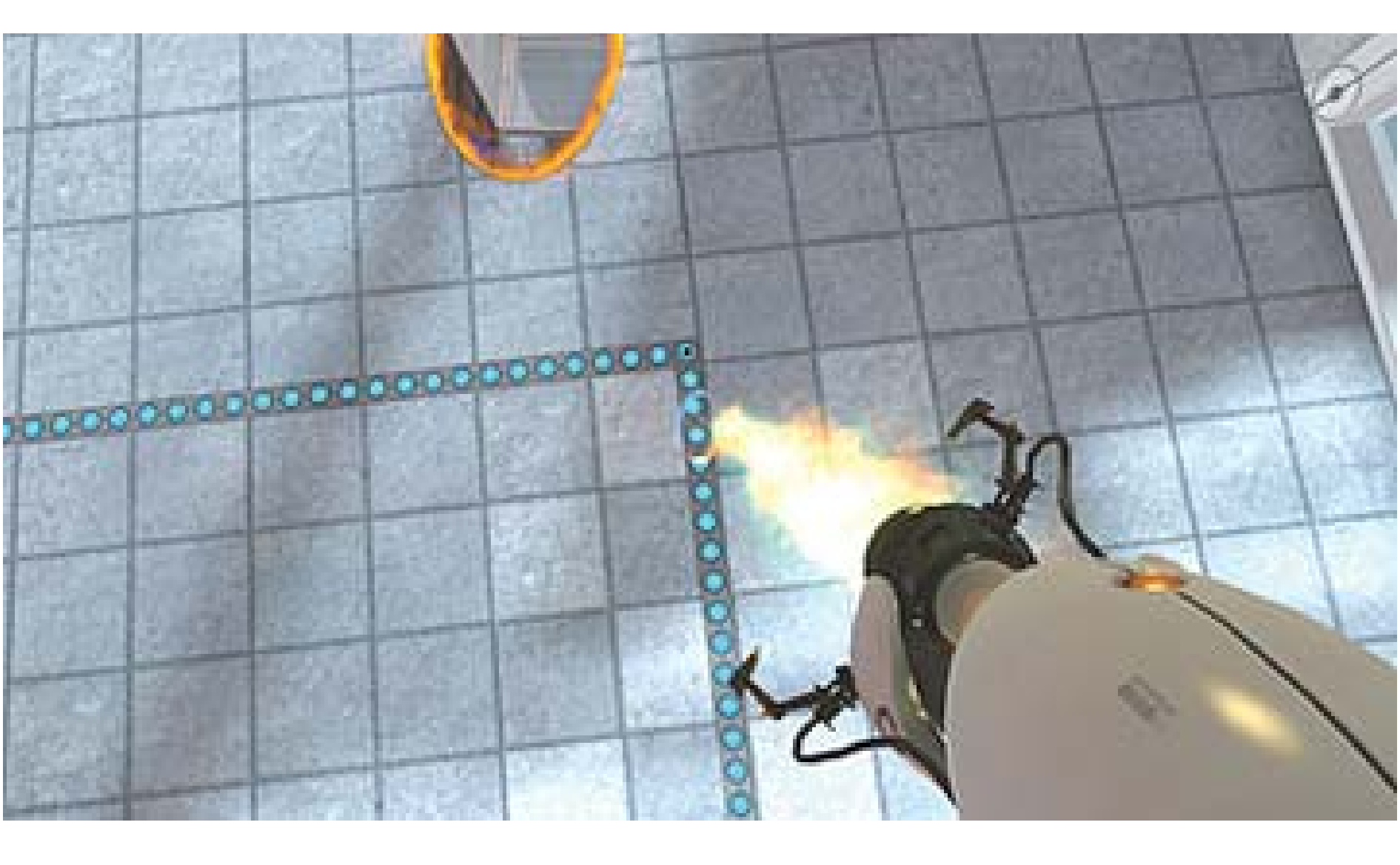




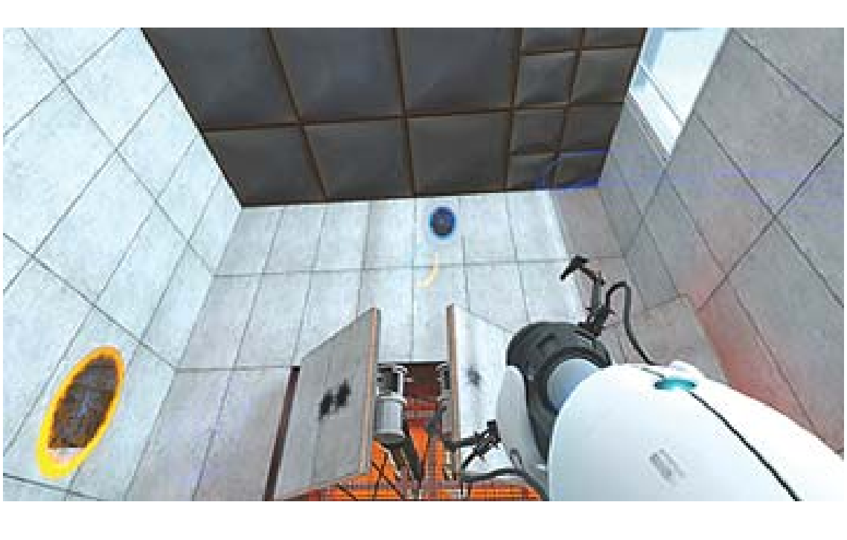
Jump through your second portal. As you emerge, replace your first portal on the ground where you're about to land—it helps if you keep aiming down. Since your first portal was originally positioned on the ceiling, the momentum should be enough to carry you through the grid as you fall through the ground. Don't think about it too much: Just be glad it works.



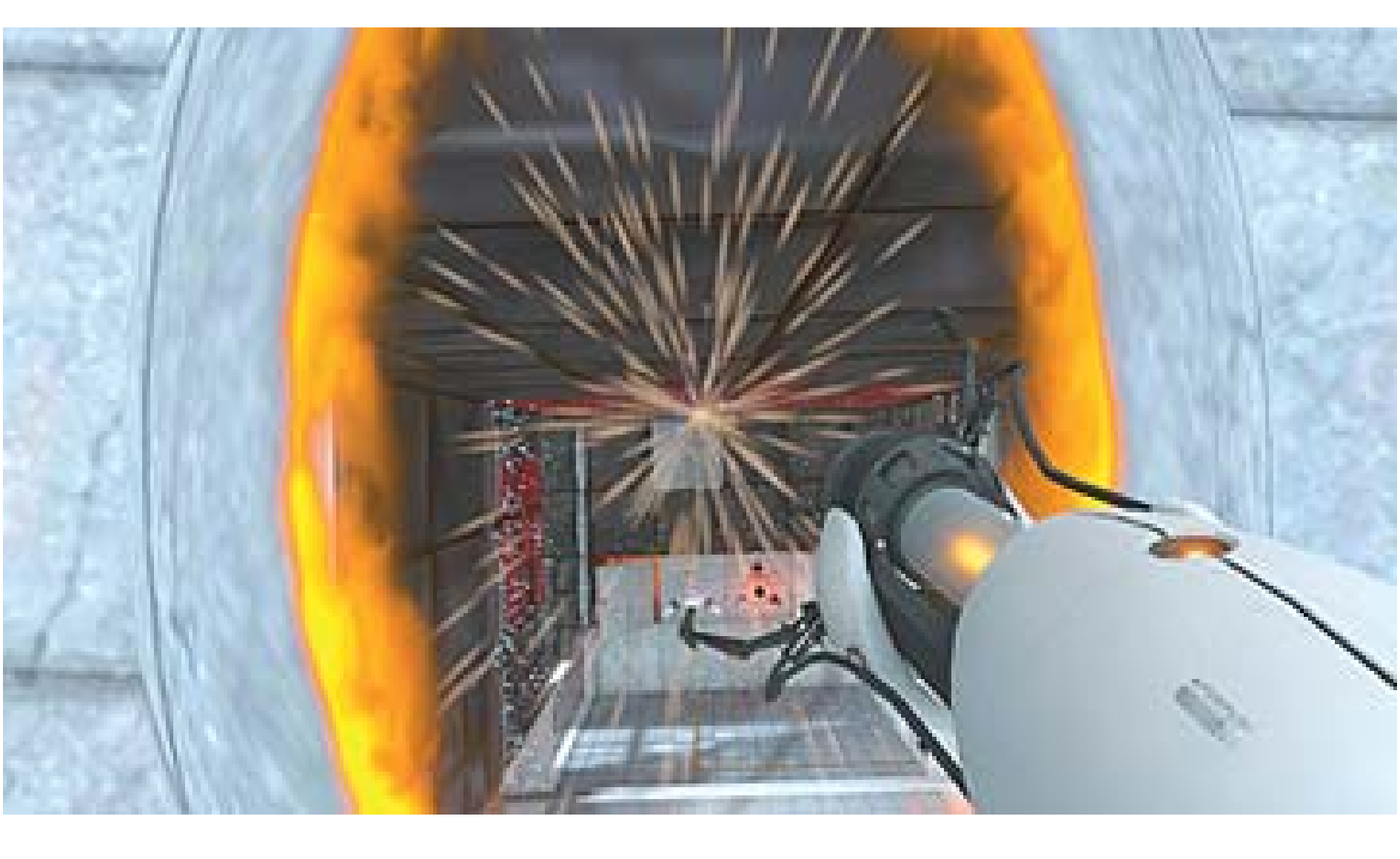


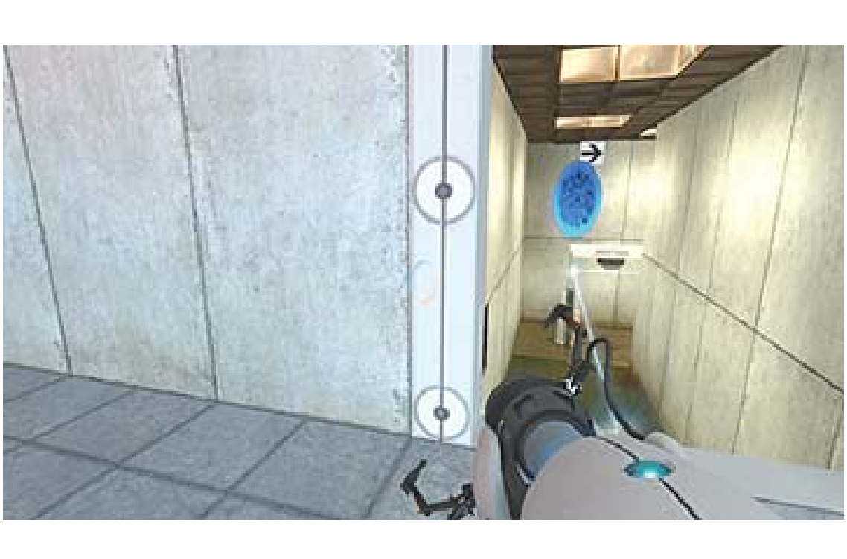


The Ball Catcher puzzle in this room is a whole lot trickier in advanced mode, but let's tackle first things first: Place your first portal on the protruding panel above the Catcher. Place your second right beneath your feet, and replace it on the ground right before you land after falling through. That was a most triumphant Double Fling!

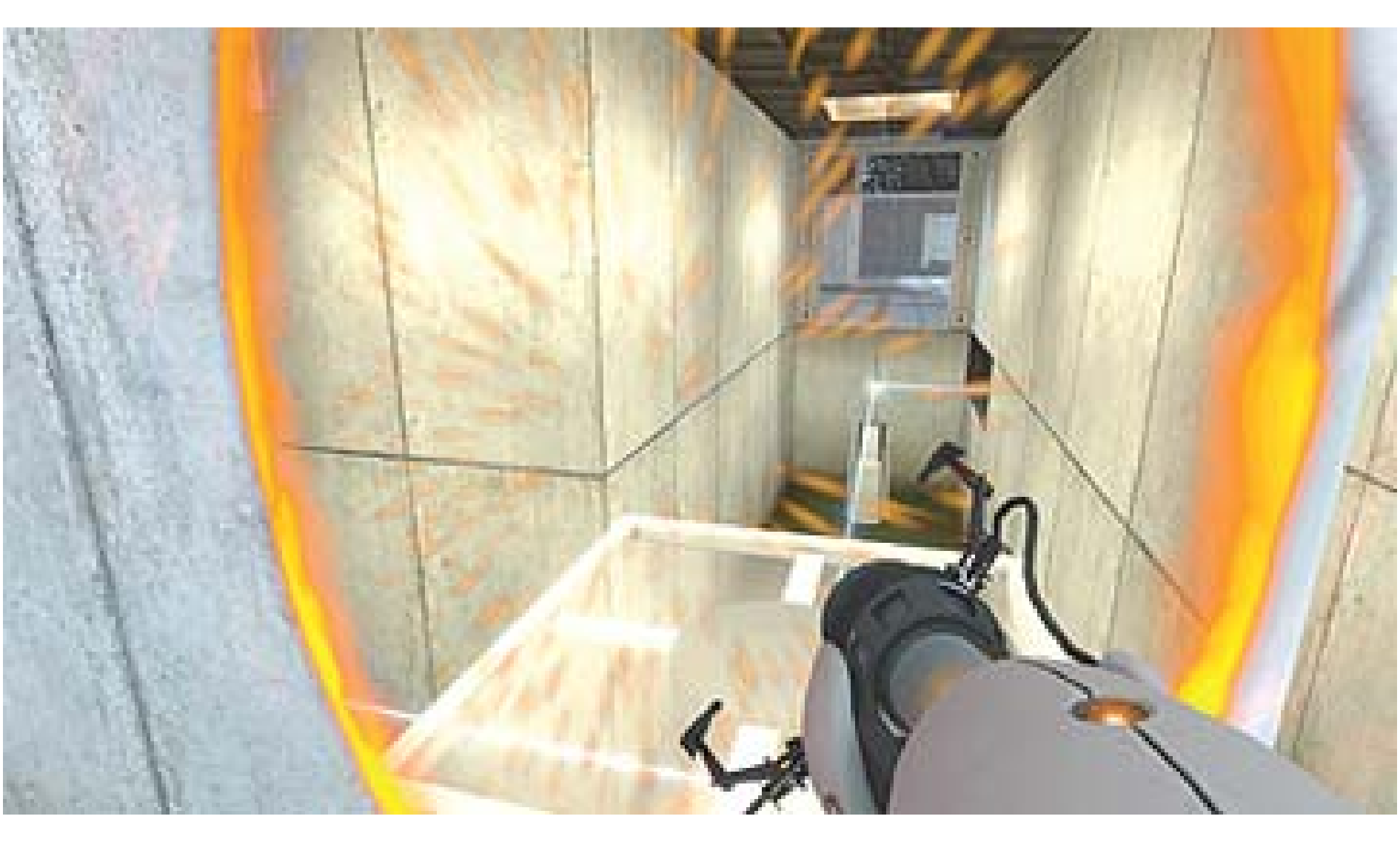


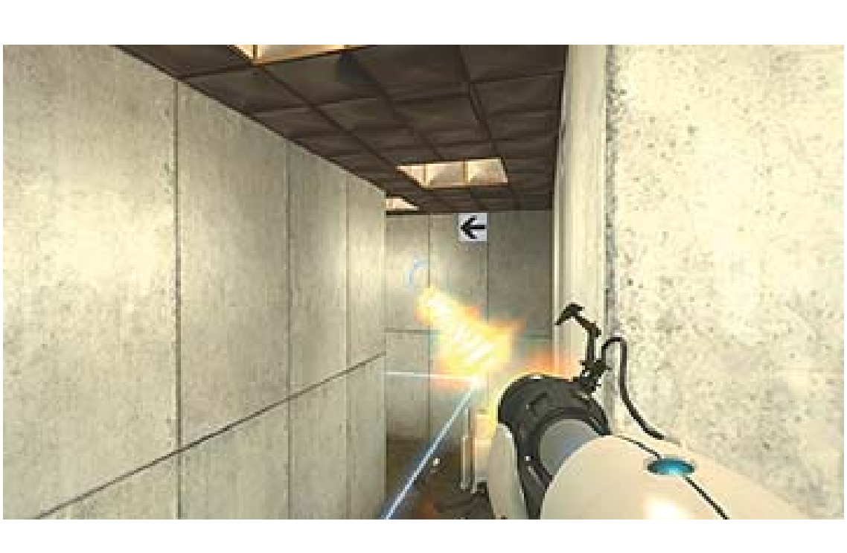
The headache-inducing wedge-panel puzzle can be surmounted very simply by the following instructions: Place your first portal on the panel facing the wedge to your left, where the ball bounces to after hitting the wedge. Place your second on the wall to the left of the wedge panel. Marvel as the Catcher puzzle effortlessly fulfills itself.

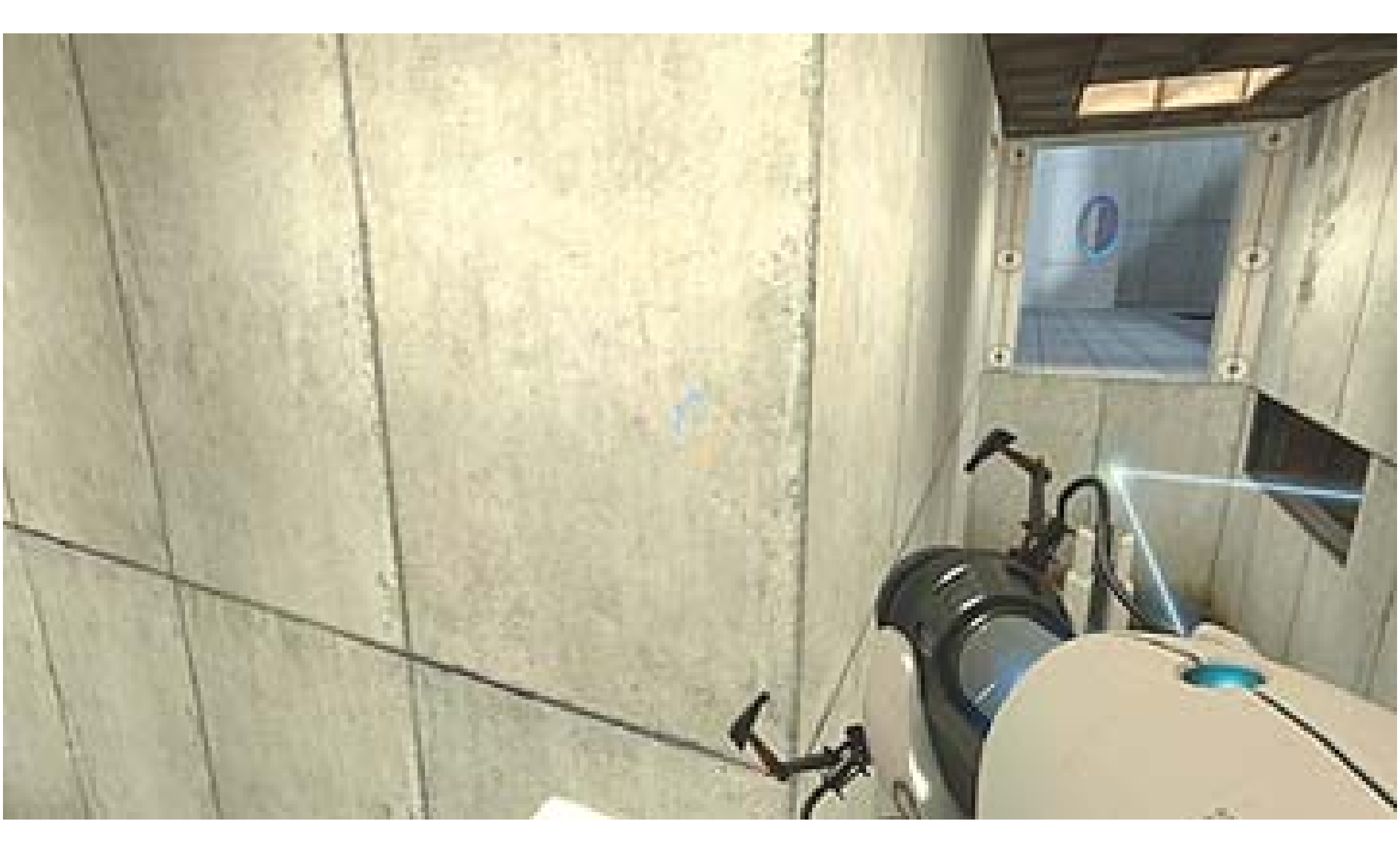




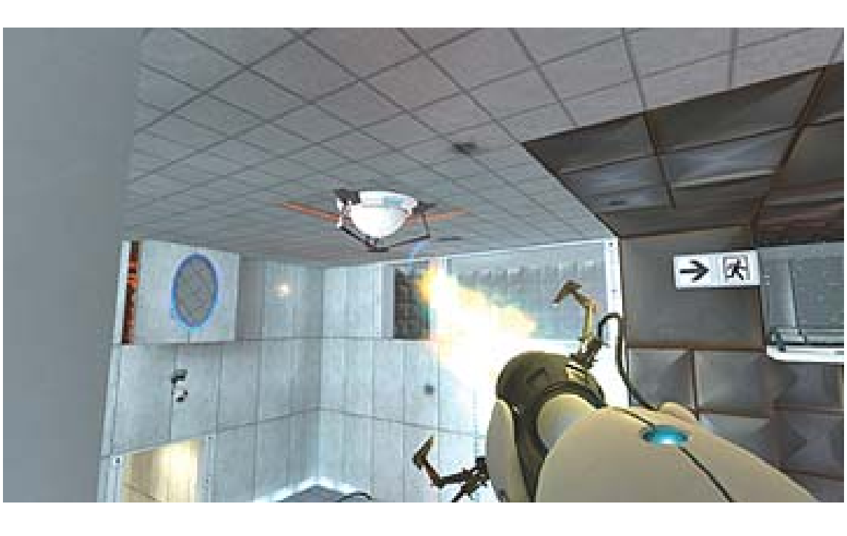
When you're done marveling, place your first portal directly above the wedge panels. Place the second at your feet, and replace it after you fall through to double-fling across the grid. Turn your attention to the newly activated lifts moving over the zigzagging goo-filled passage.

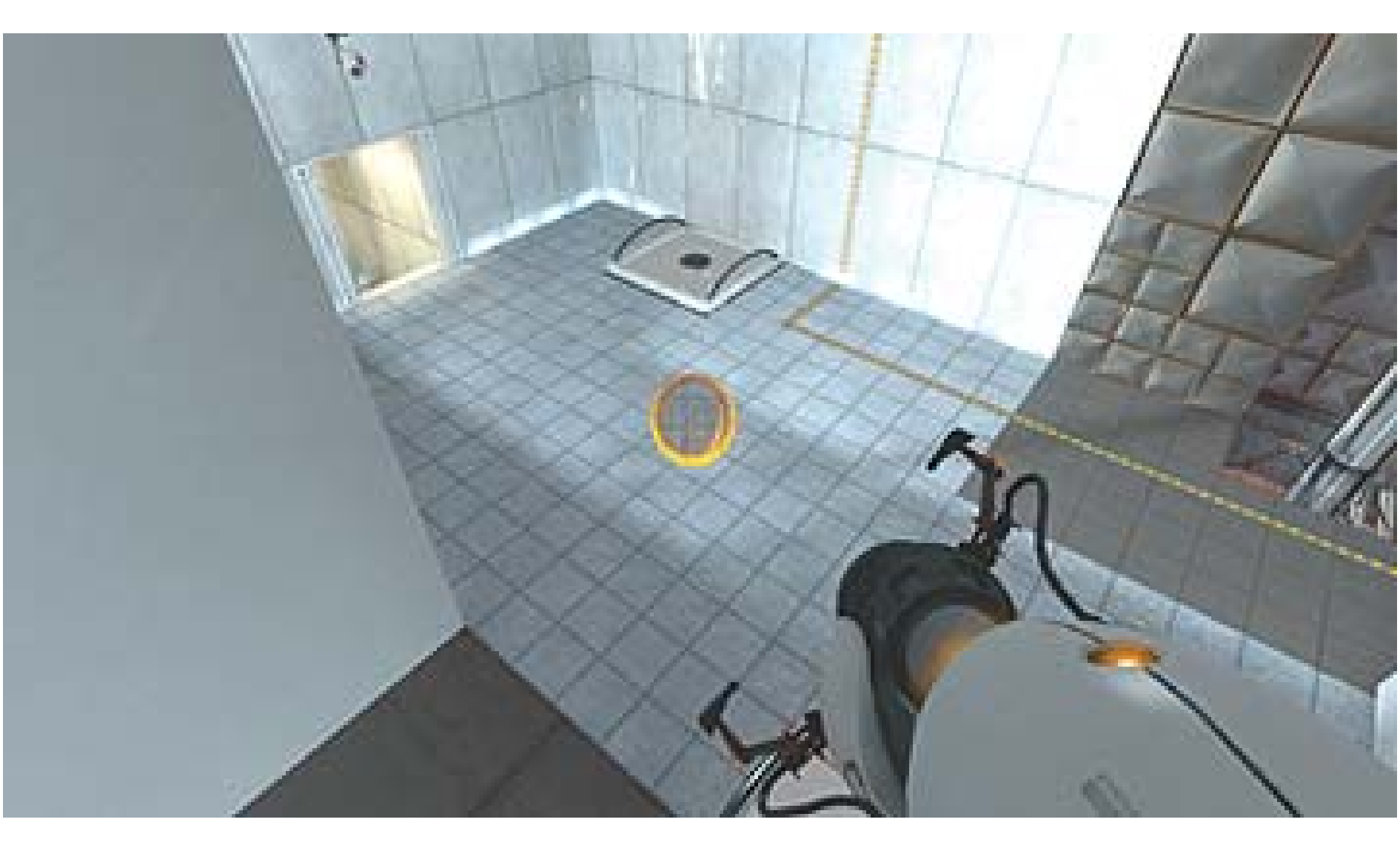




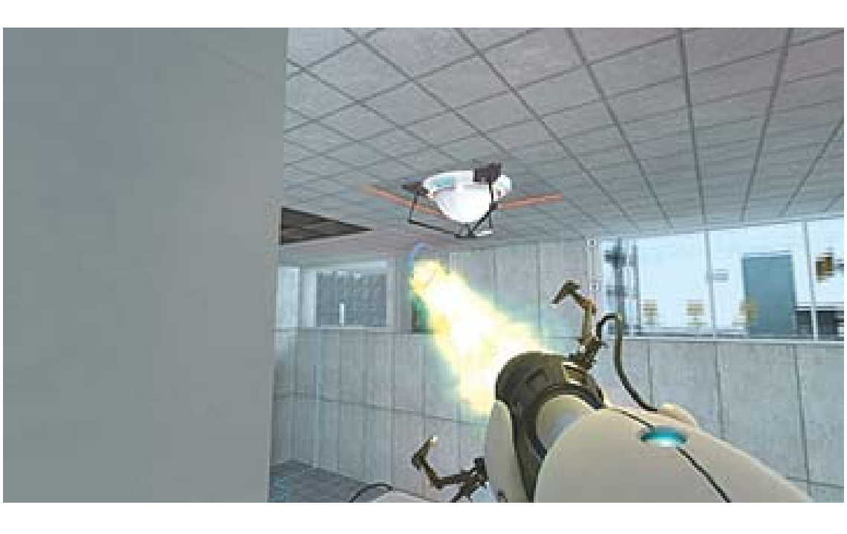


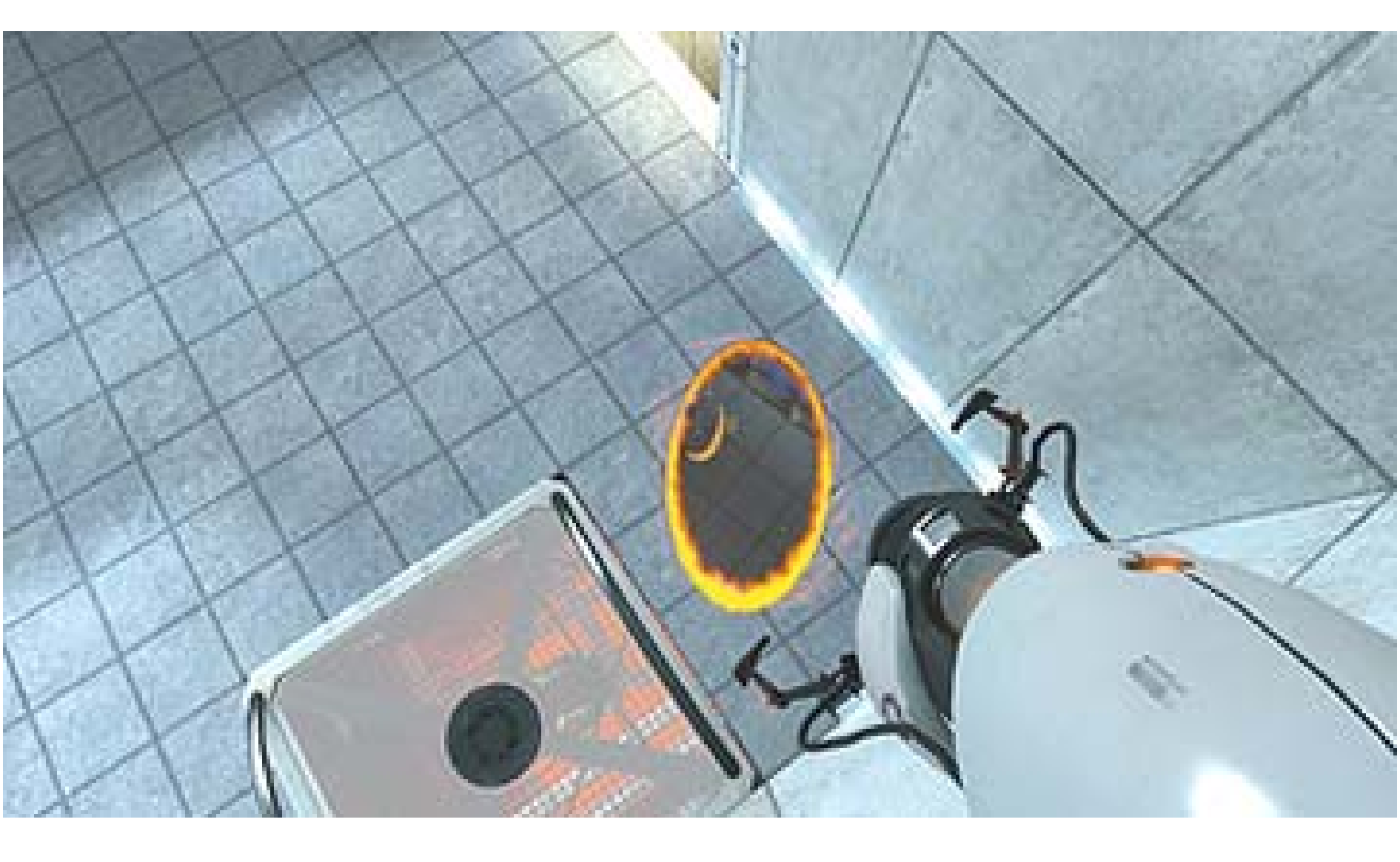
Treat this portion of the exercise just like you did in the normal version of Test Chamber 15: Place your first portal on the wall directly ahead of you when you're looking into the passage, and place your second just outside the entrance. Wait until the lift is accessible, then repeat the process until you can fire a portal at the wall in the next room. Take a break if you're getting agitated, as this next room is one of the most trying that you'll encounter.





In advanced mode, you can only place portals on the ceilings of the switch rooms, which makes solving the Catcher puzzle here much more challenging. Pick one of the switch rooms and get into it. You actually want the energy ball traveling toward the shut Catcher before you hit the switches, though, so place your first portal on the protruding panel opposite the Catcher and your second where the ball hits the ground. It helps to wait until the Ball Launcher spits out a fresh energy ball.





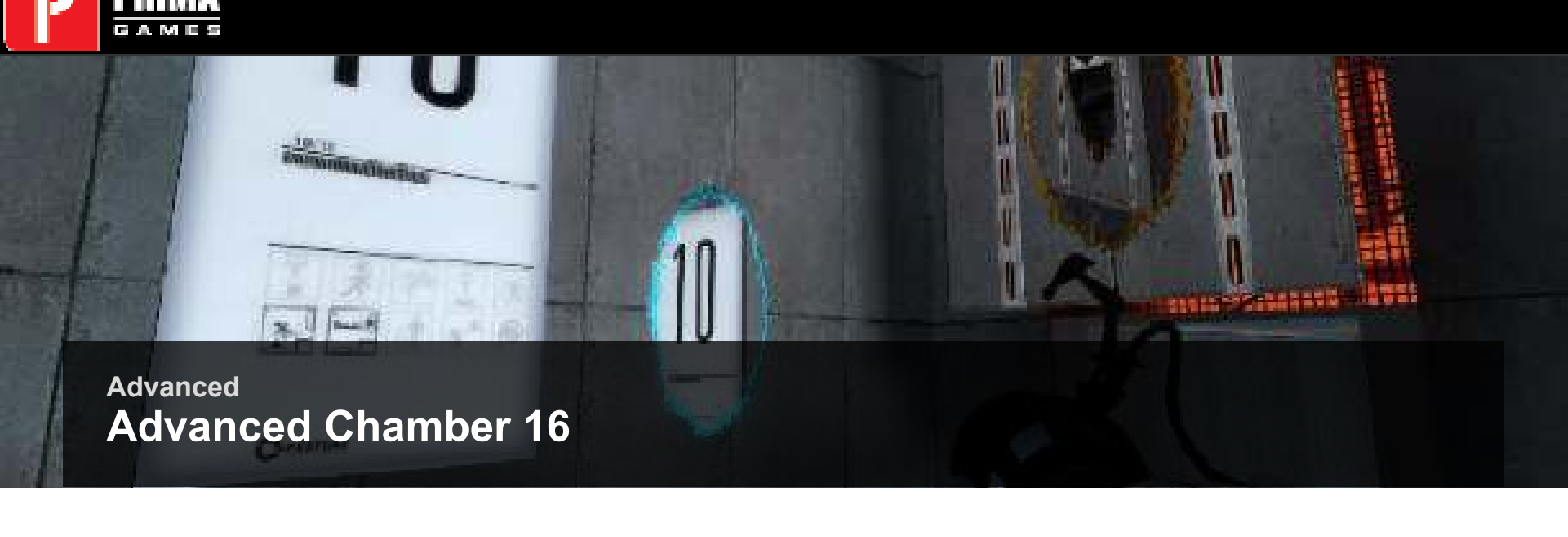
Now aim a portal at the ceiling of switch room you aren't currently in. Once it's there, hit the switch in your room, aim a portal on the ground where you'll fall, and hit the second switch as quickly as you can. Precise timing rewards you with a descending exit lift.

Note

Portal Challenges become available after you've completed the game, and they allow you to tackle Test Chambers 13 through 18 with a host of daunting restrictions. There are three types:

- **Portals:** Use the fewest portals possible to complete a Test Chamber.
- **Steps:** Take the fewest steps possible when completing a Test Chamber.
- **Time:** Complete a Test Chamber as quickly as possible.

While these challenges are strictly for the hardest of the hard core, we've provided strategies straight from the creators themselves to give you a boost. Apart from practice, discipline, dexterity, and timing, this is the most significant advantage you could hope for!

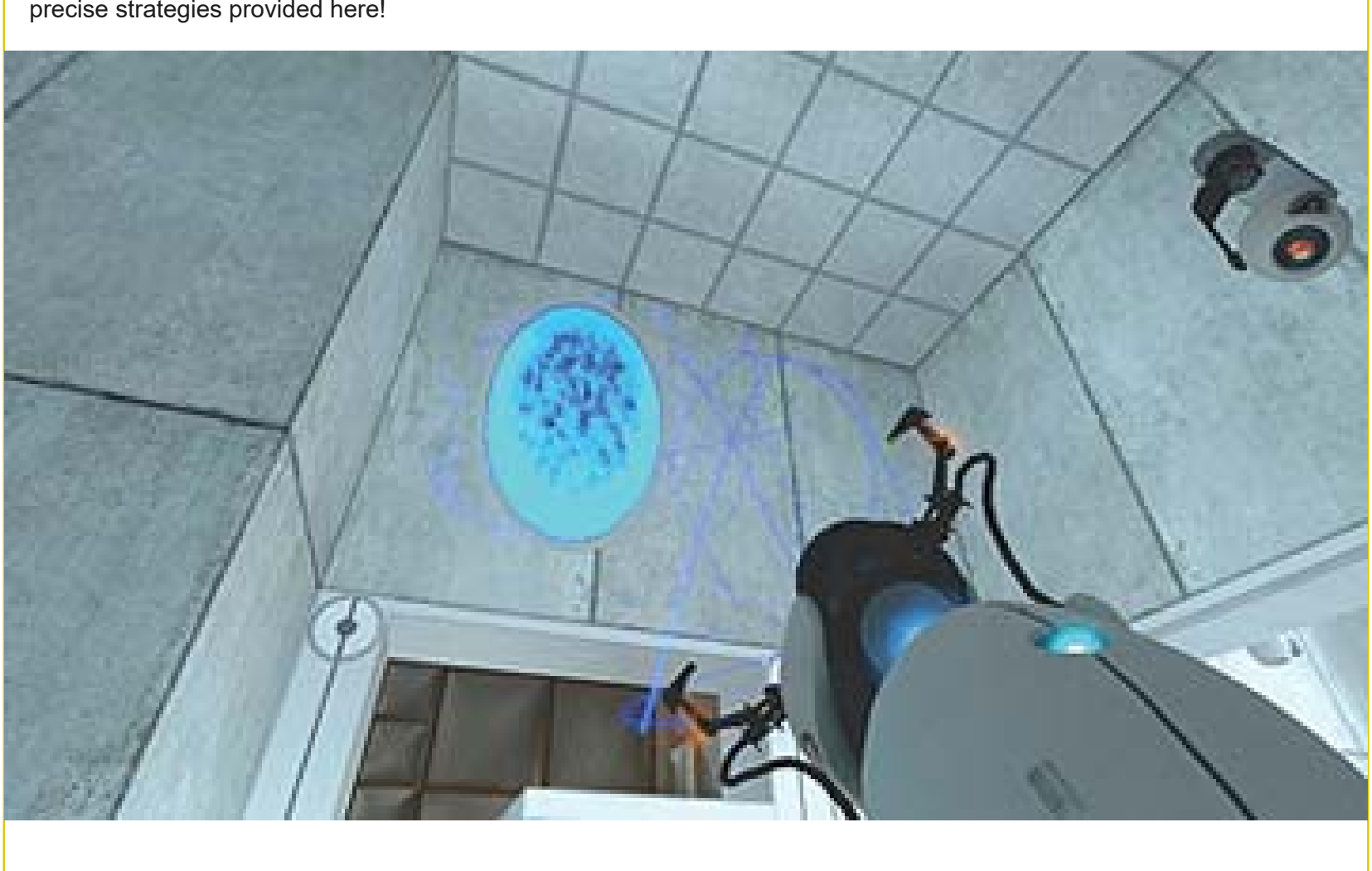


Advanced

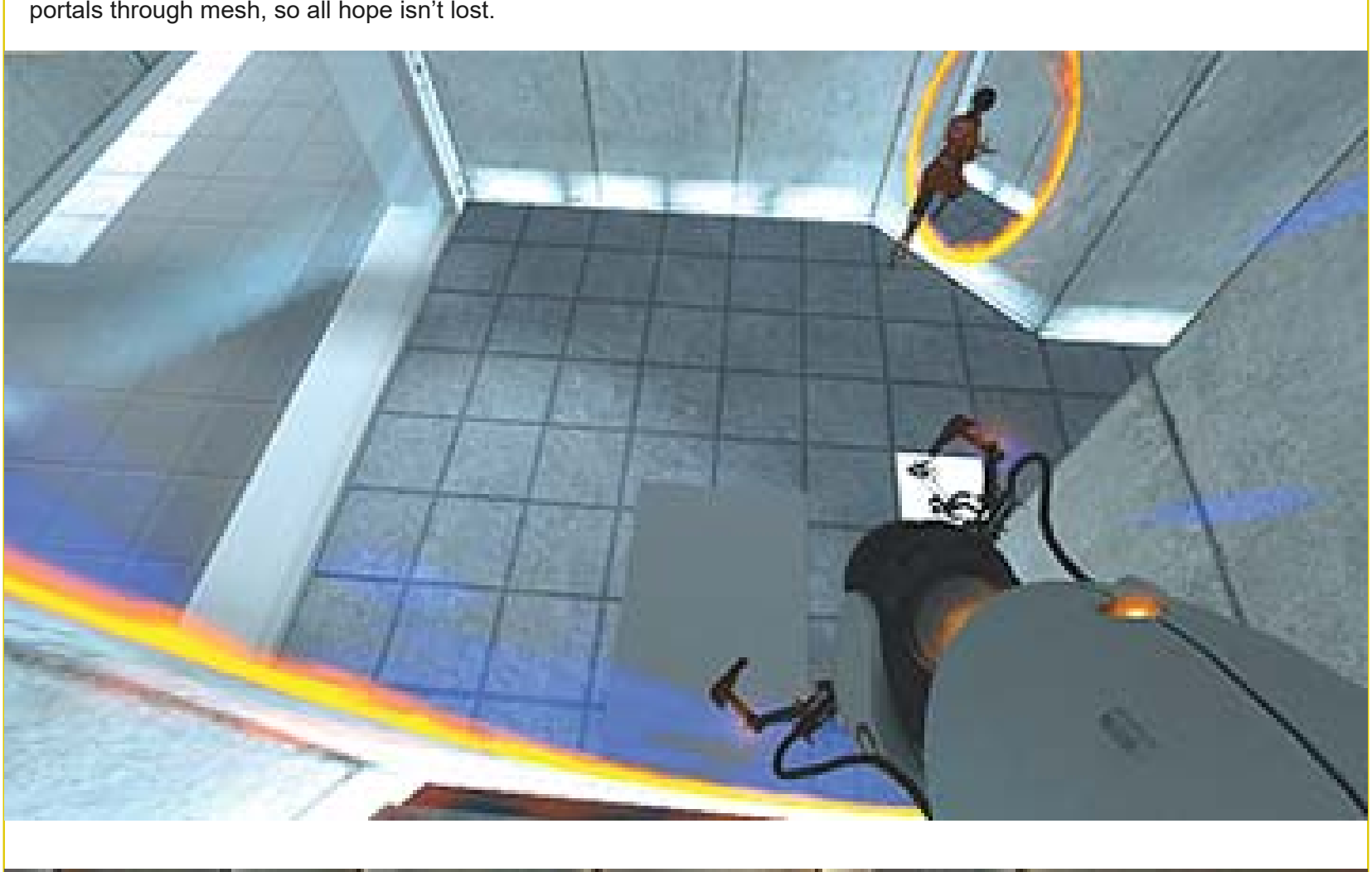
Advanced Chamber 16

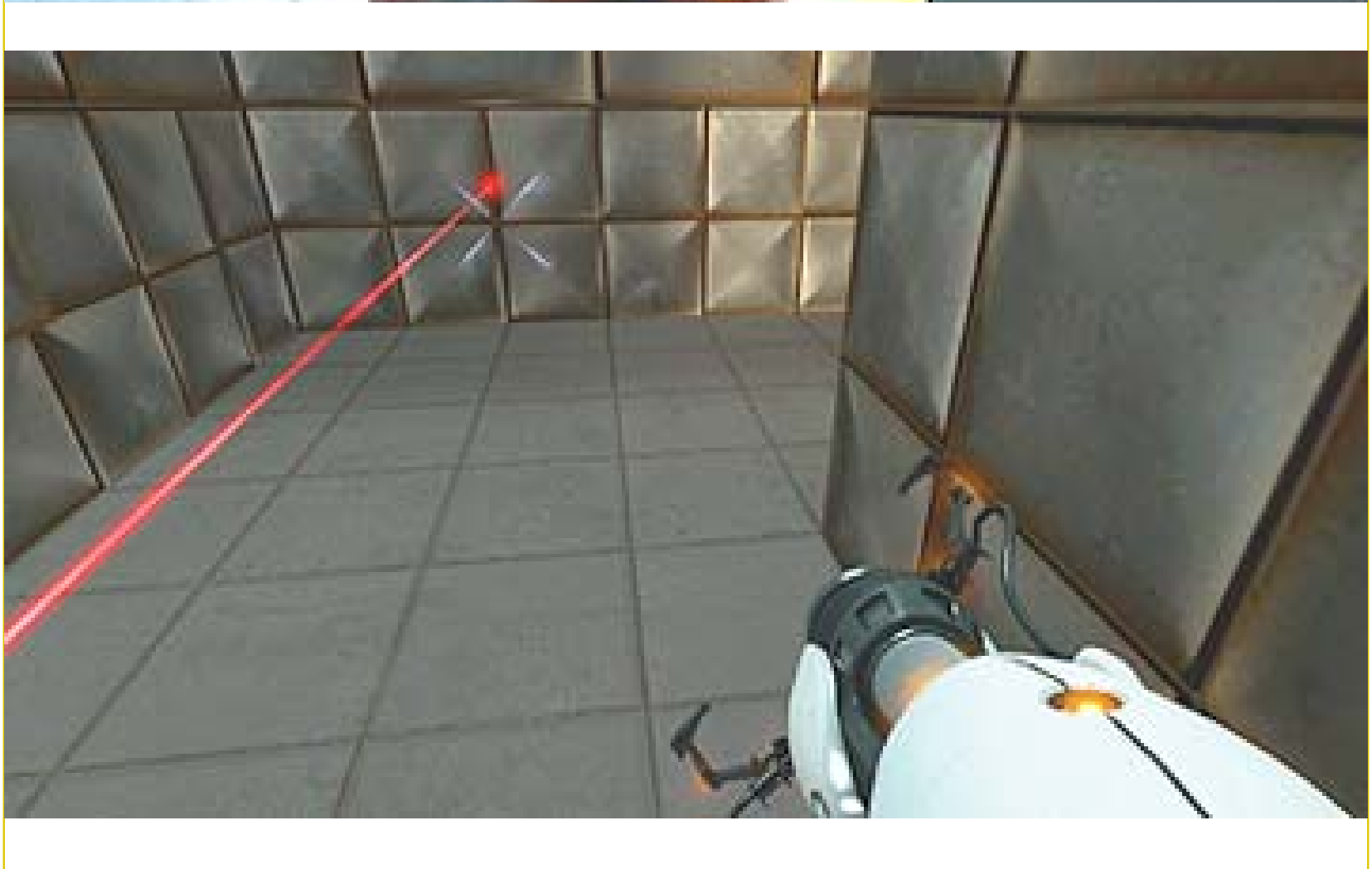
Note

Advanced Chambers are modified versions of Test Chambers 13 through 18 that become available after you've completed the game. They've been tweaked to be much more difficult than their normal counterparts, so pay heed to the precise strategies provided here!

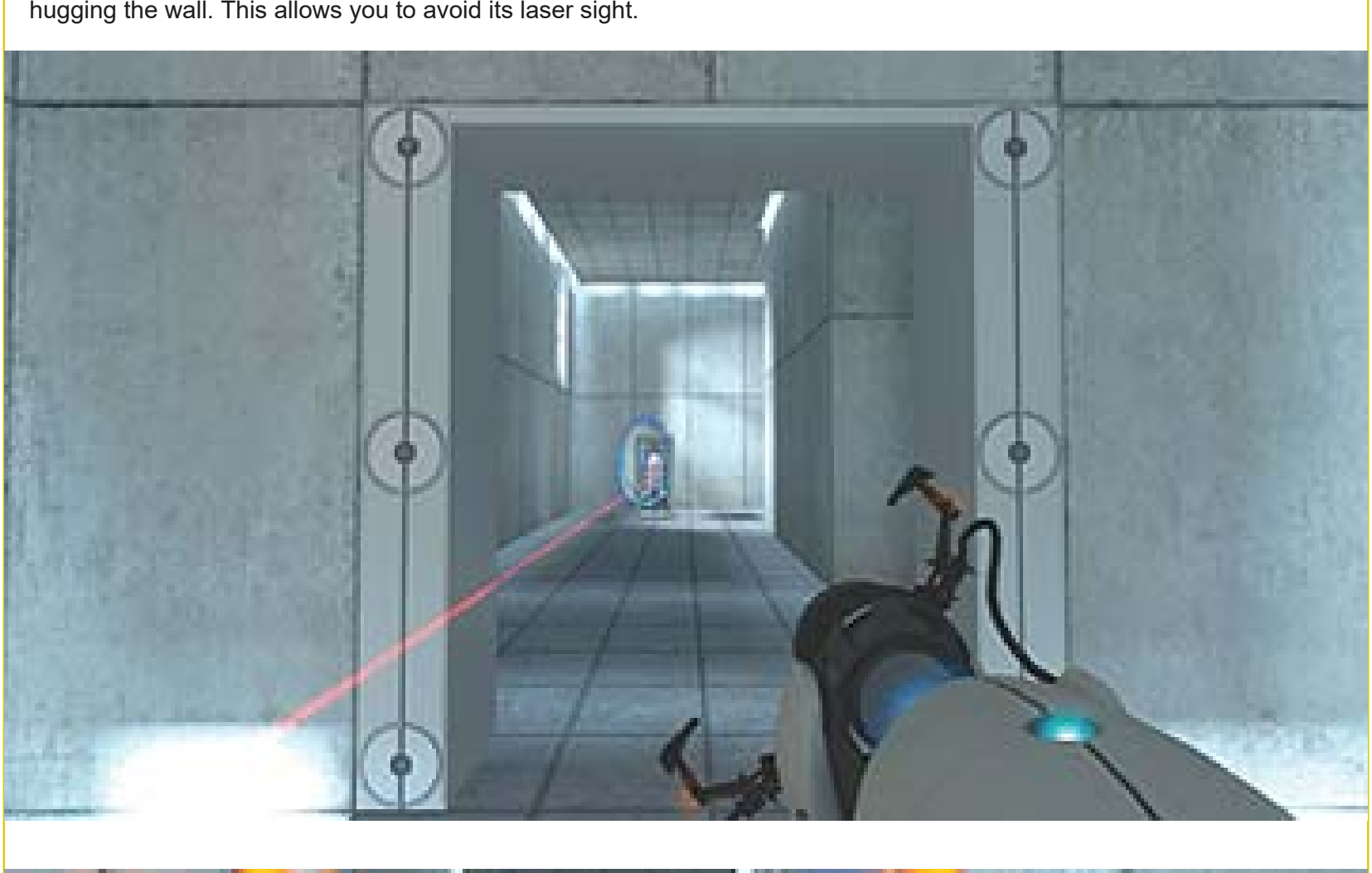


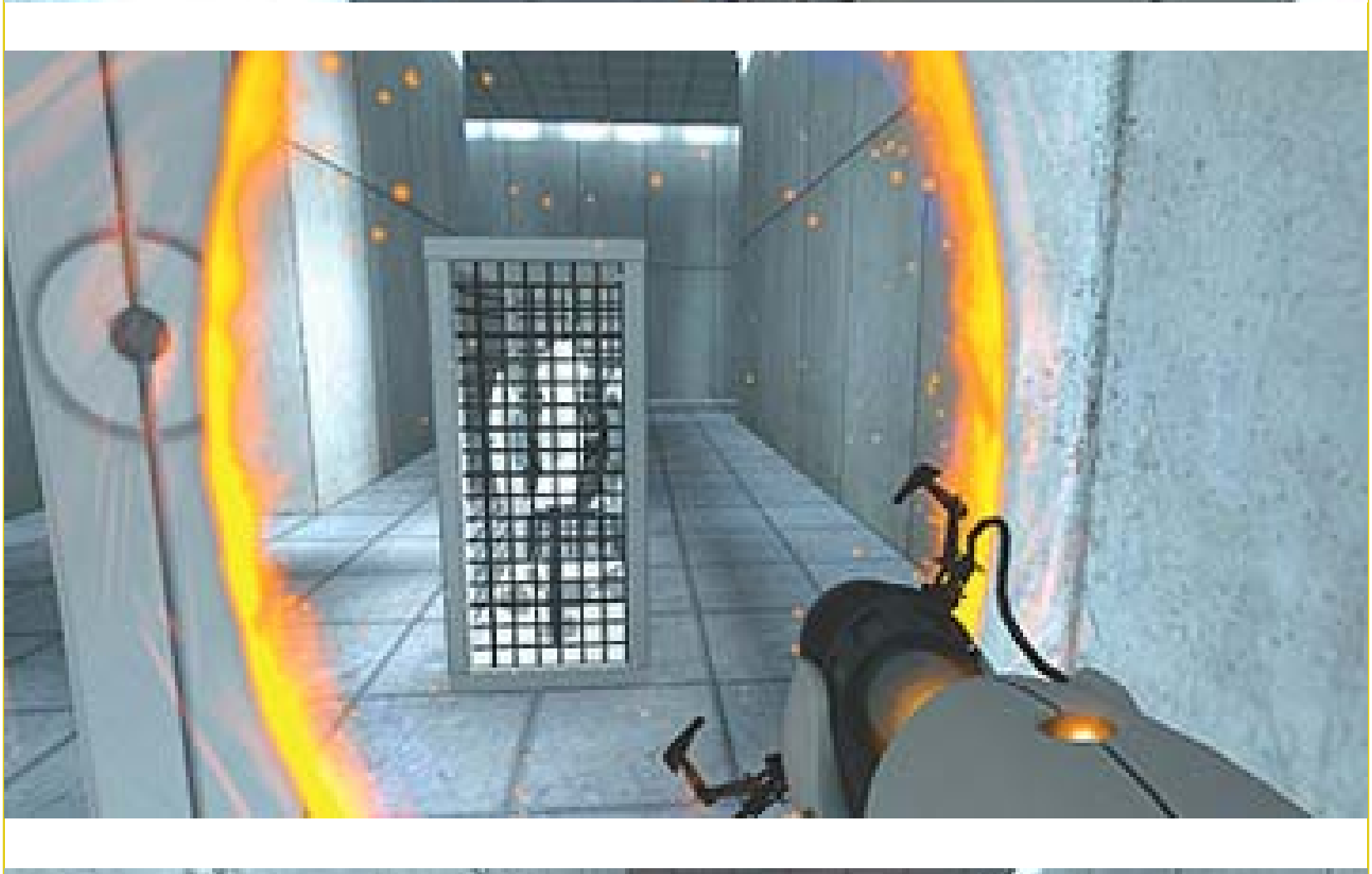
There's only one real difference between Test Chamber 16's advanced version and its normal part, but it's a huge one: All the stationary turrets are encased in mesh cages. This means you can't tip them over. On the bright side, you can fire portals through mesh, so all hope isn't lost.

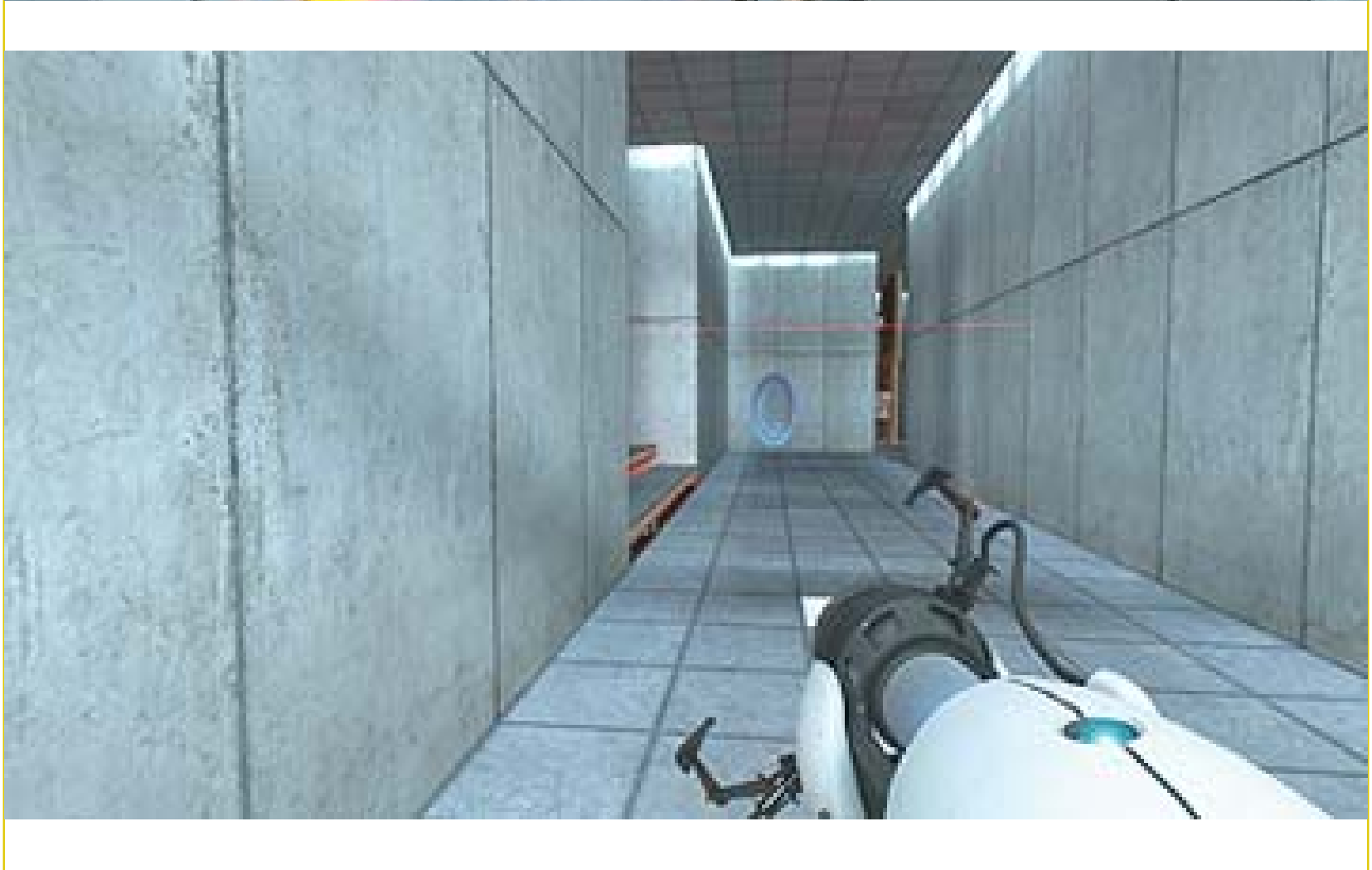




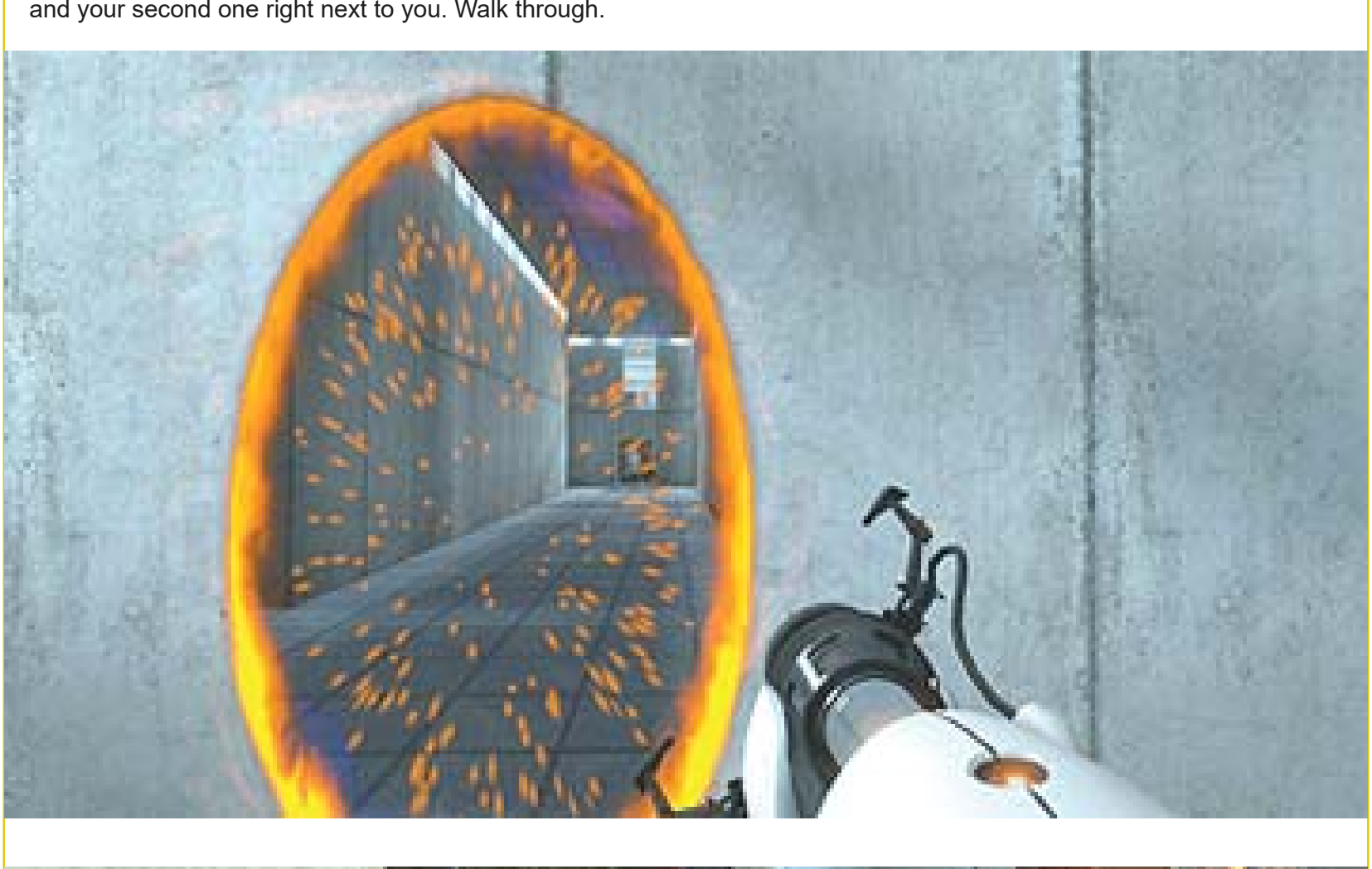
Get around the first caged turret by placing your first portal directly above it, and your second on a nearby wall. Walking through the second puts you directly on top of the turret's cage. Now fall off its right side, walk out of the alcove while hugging the wall. This allows you to avoid its laser sight.

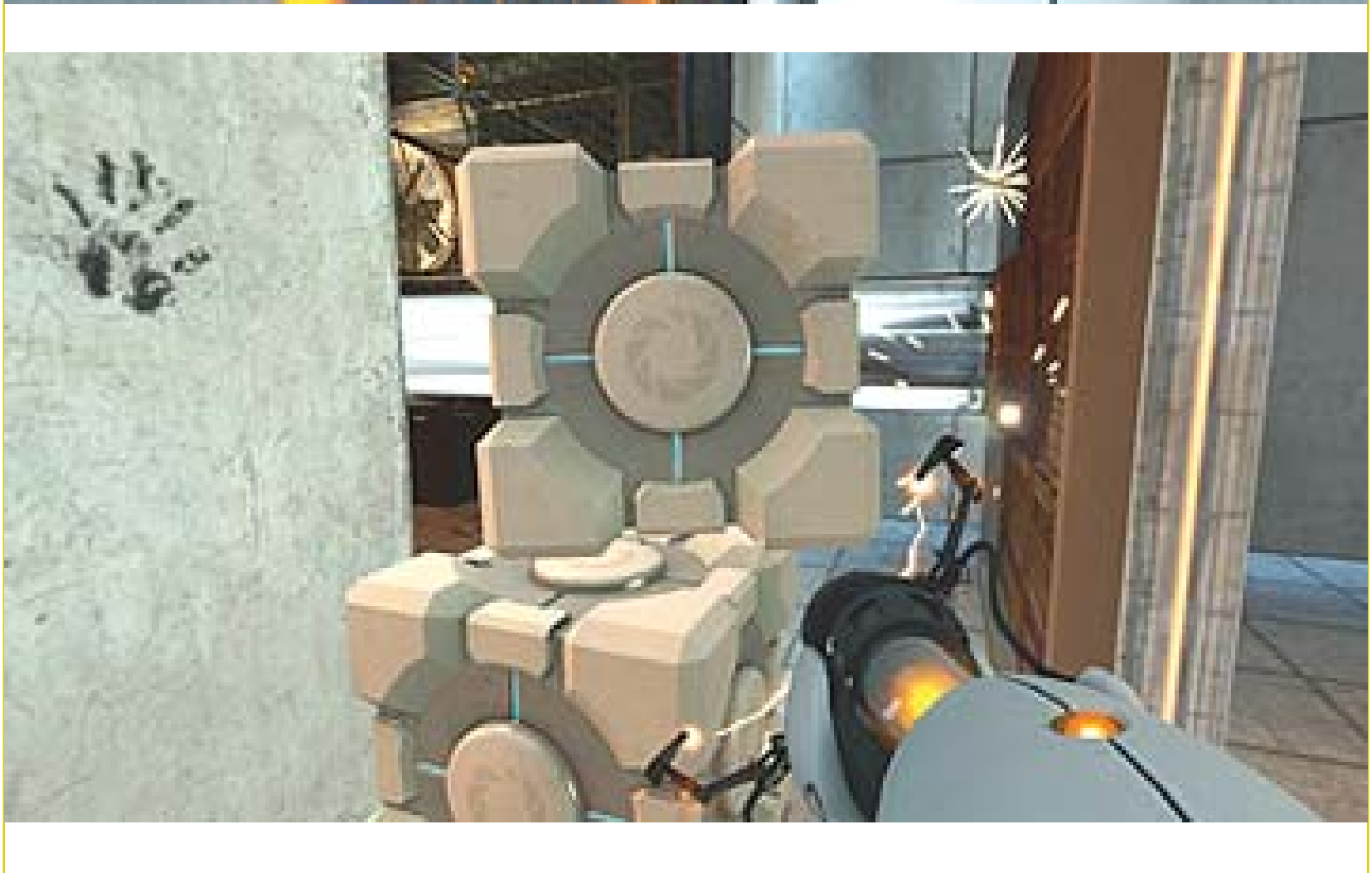




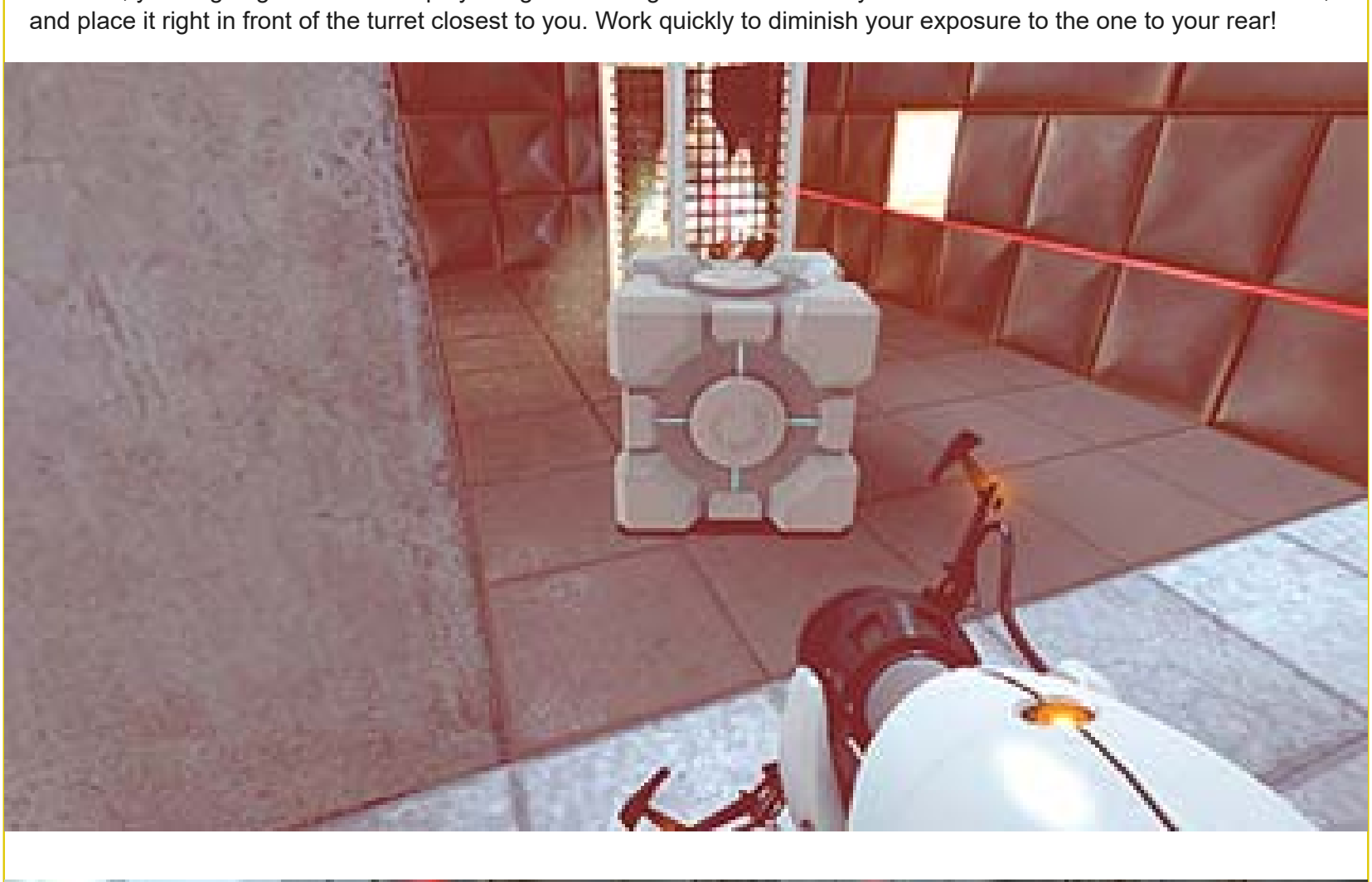


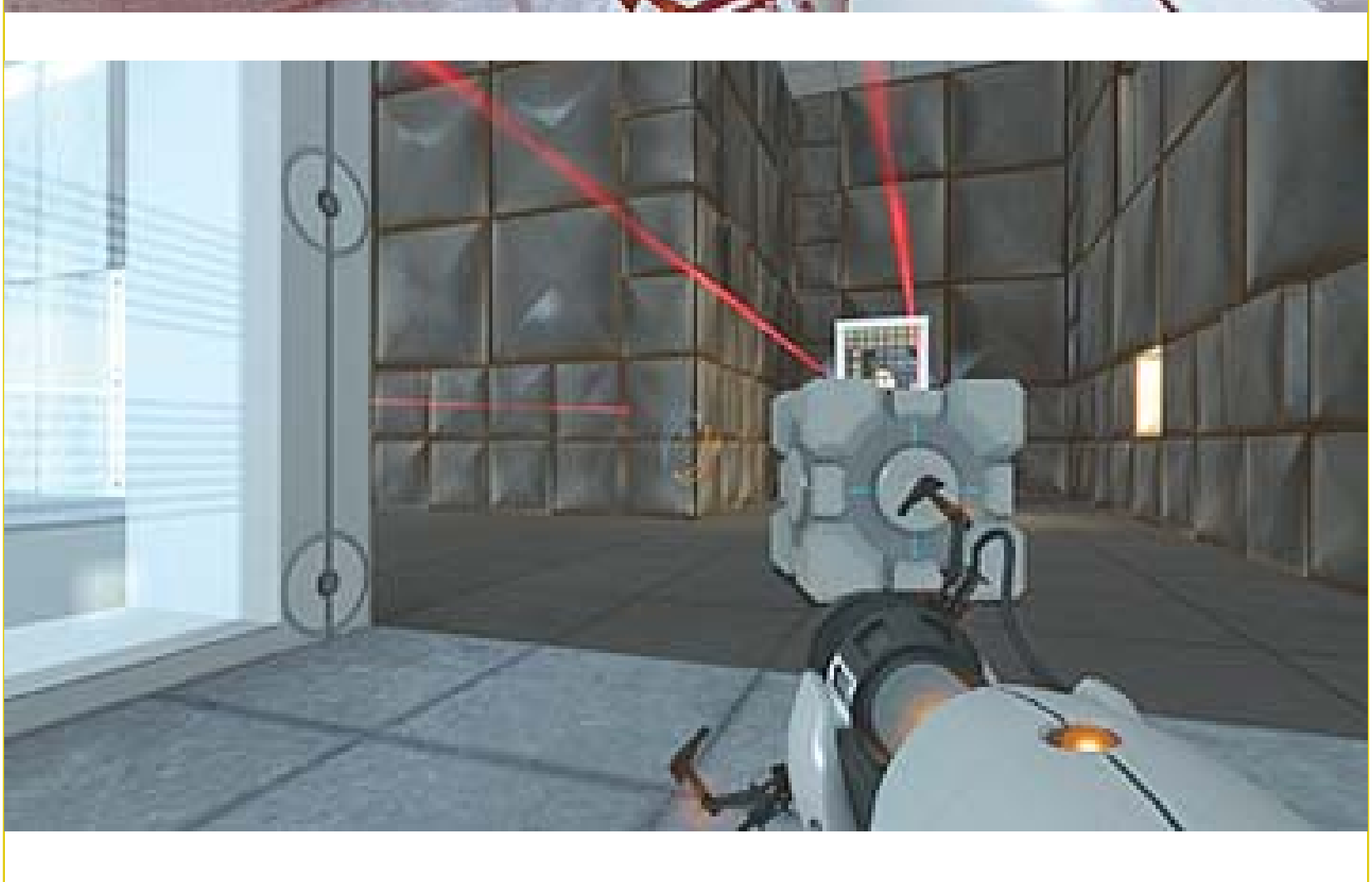
Bypass the next turret by placing your first portal directly behind it and walking through your second portal. Turn left after you emerge, and repeat the process to avoid the turret atop the stairs: Place your first portal at the far wall ahead of you and your second one right next to you. Walk through.



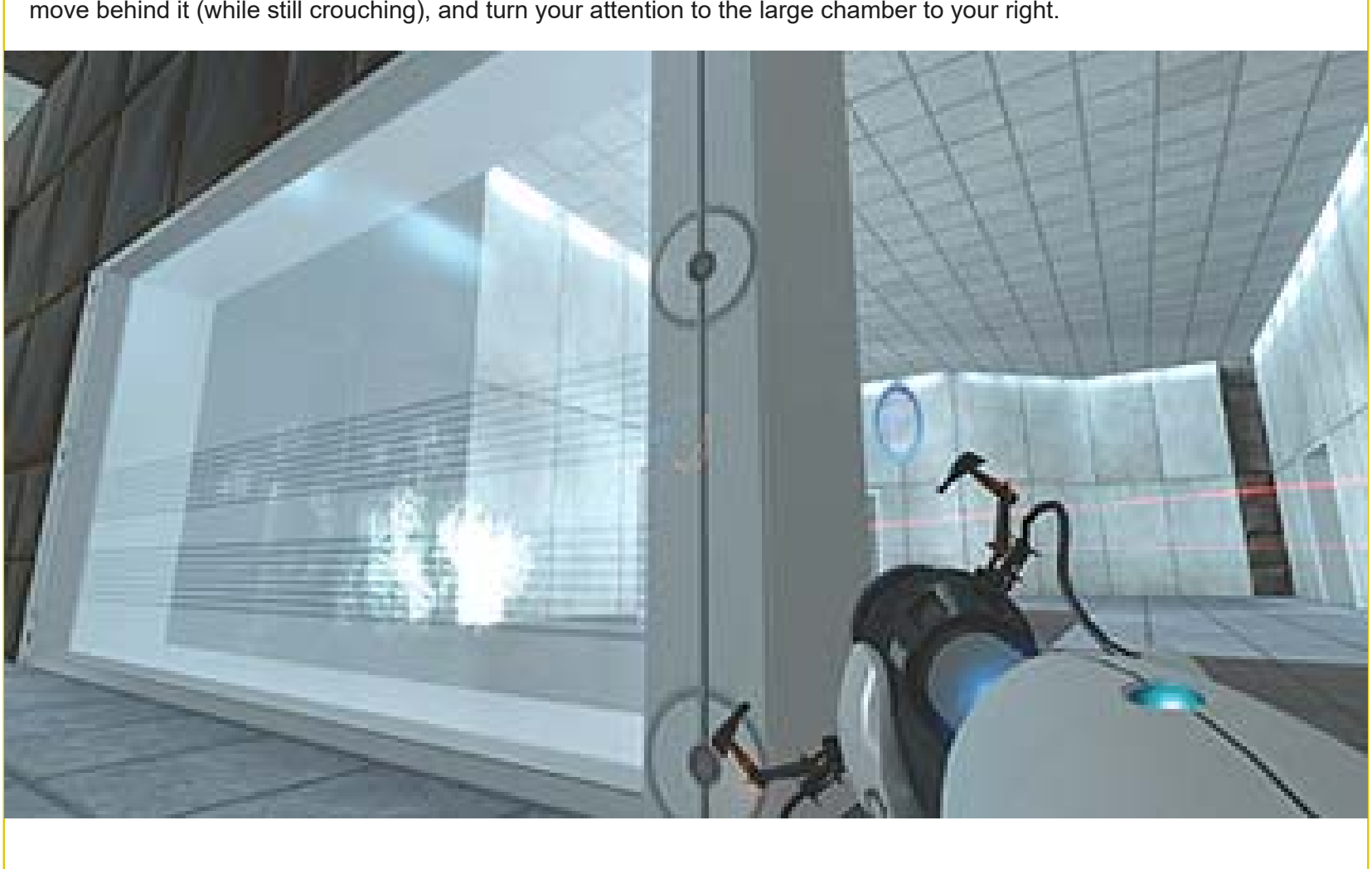


You're now about to cleverly deal with the turrets arranged face-to-face. Since you can't destroy them to stop the crossfire, you're going to have to employ Weighted Storage Cubes to shield you from certain death. Grab the first Cube, and place it right in front of the turret closest to you. Work quickly to diminish your exposure to the one to your rear!

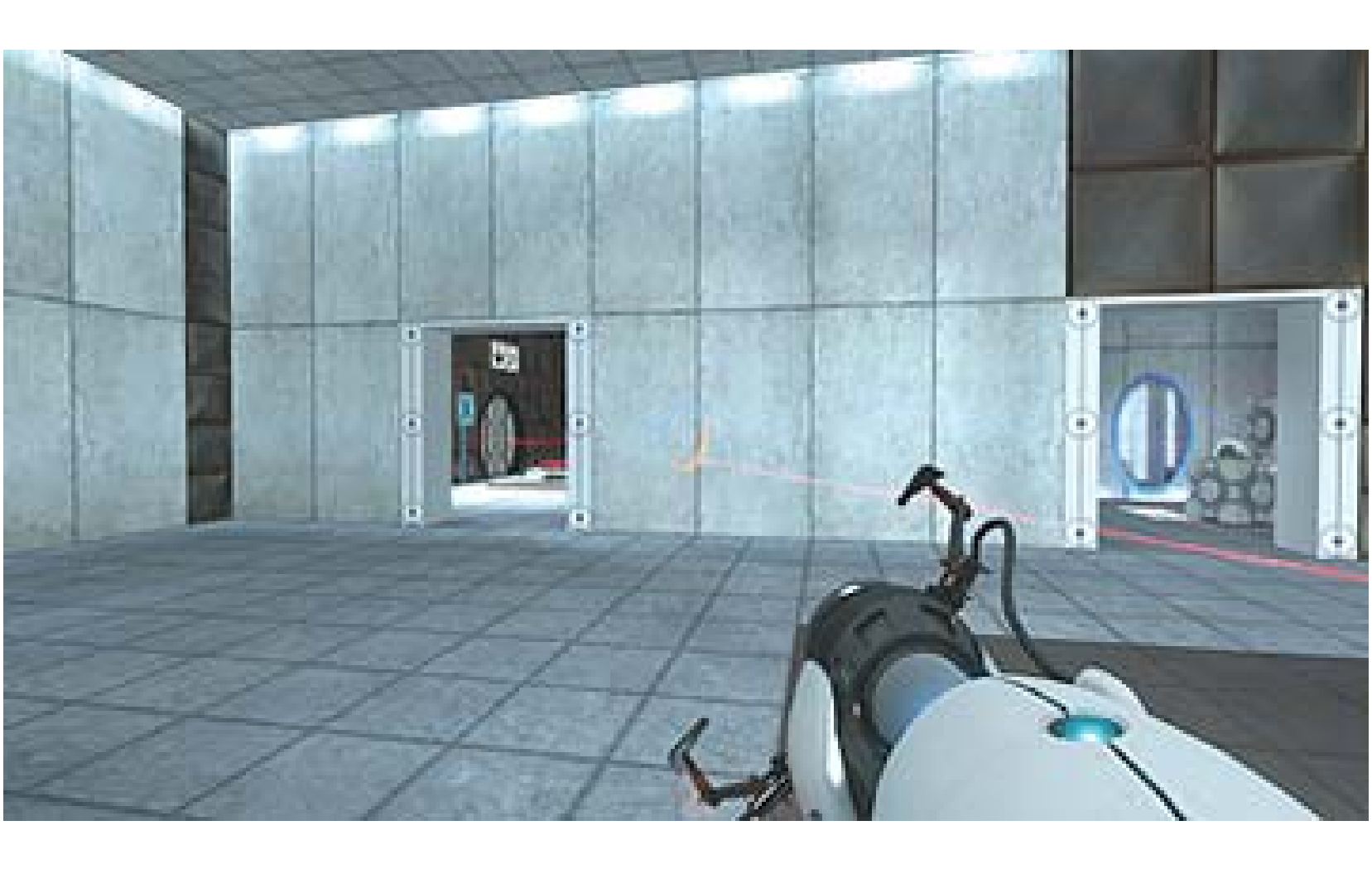


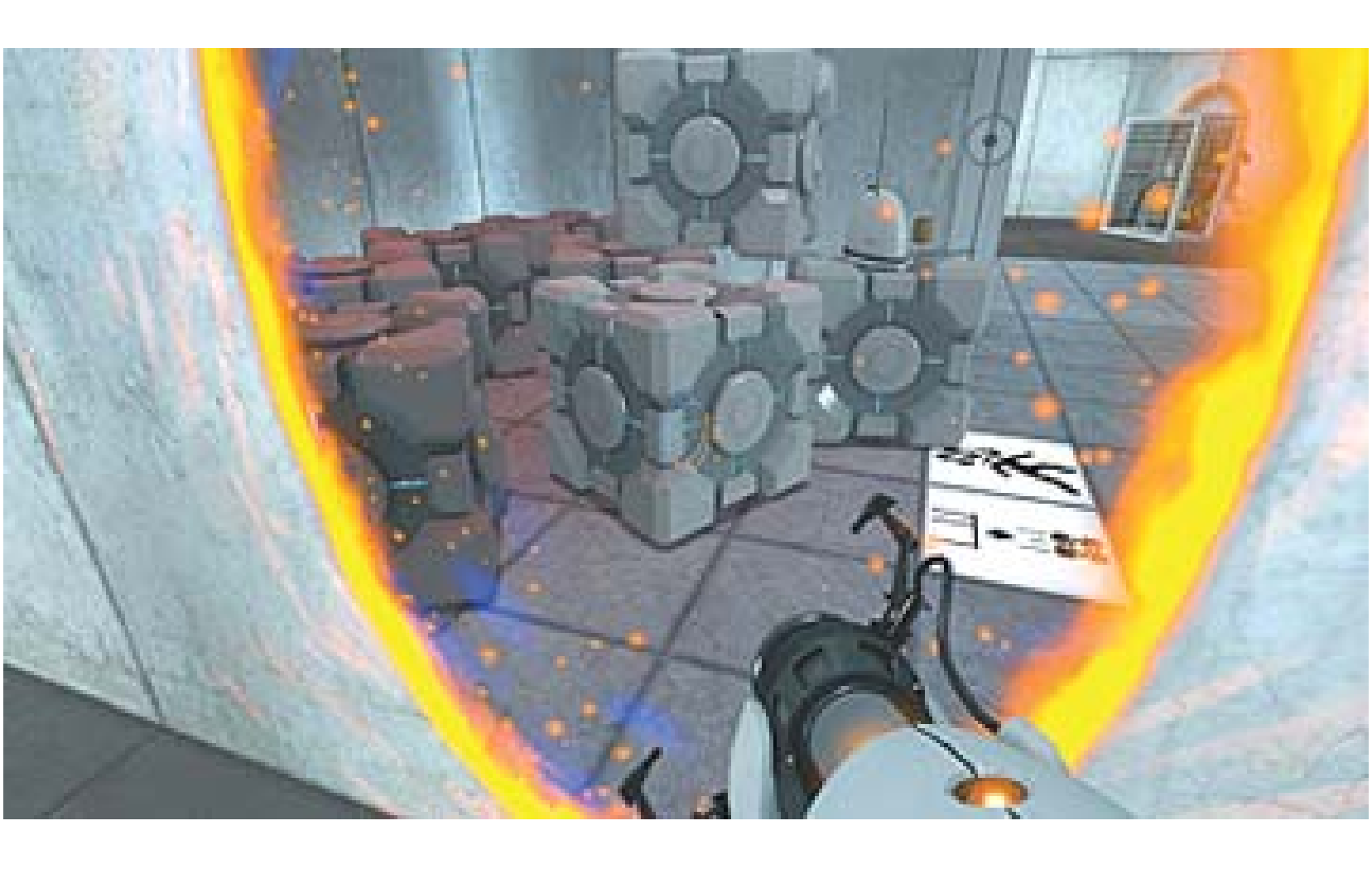


Now grab the second Cube, hit CROUCH , and edge your way toward the second turret. Muzzle it with the Cube, then move behind it (while still crouching), and turn your attention to the large chamber to your right.

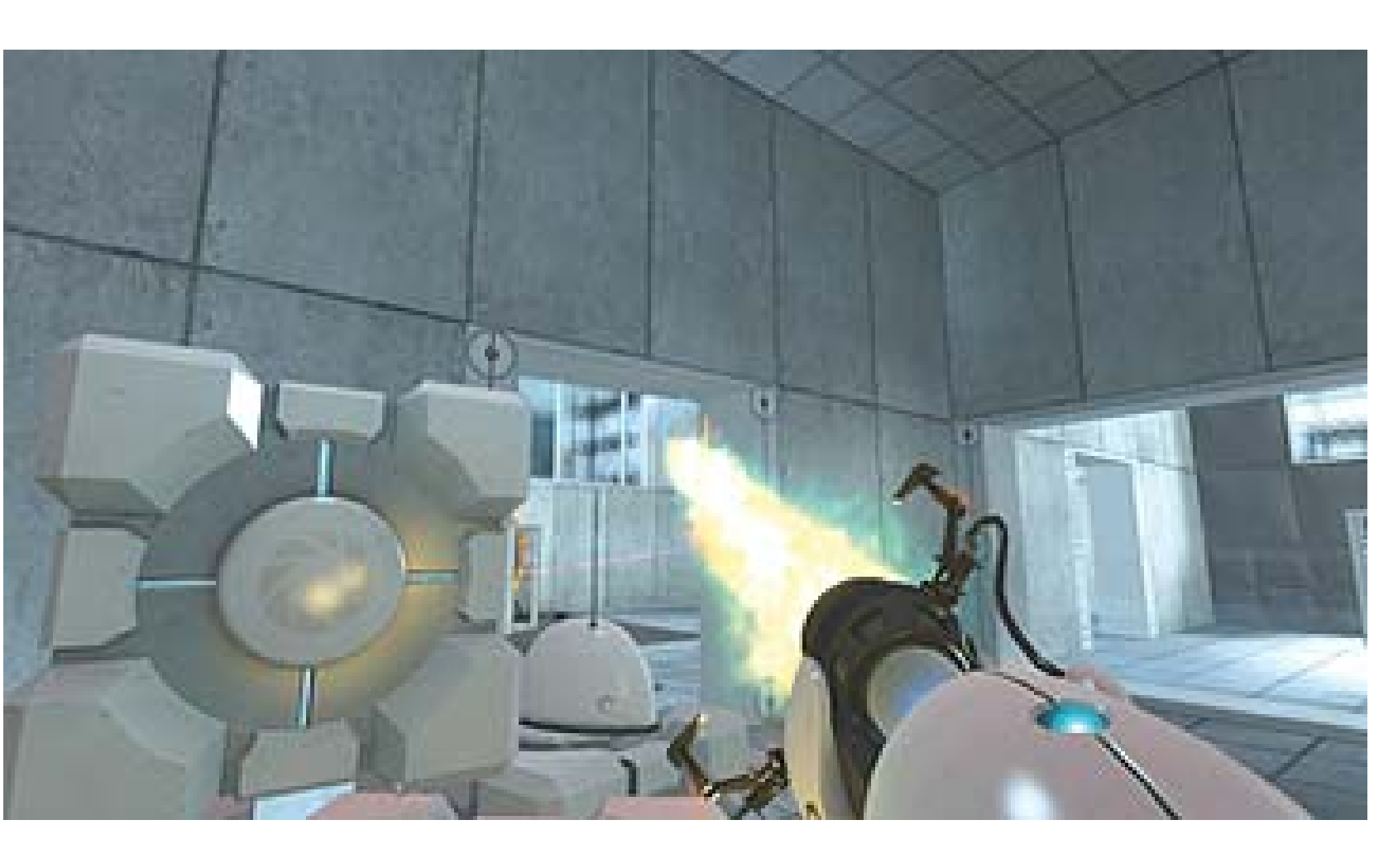


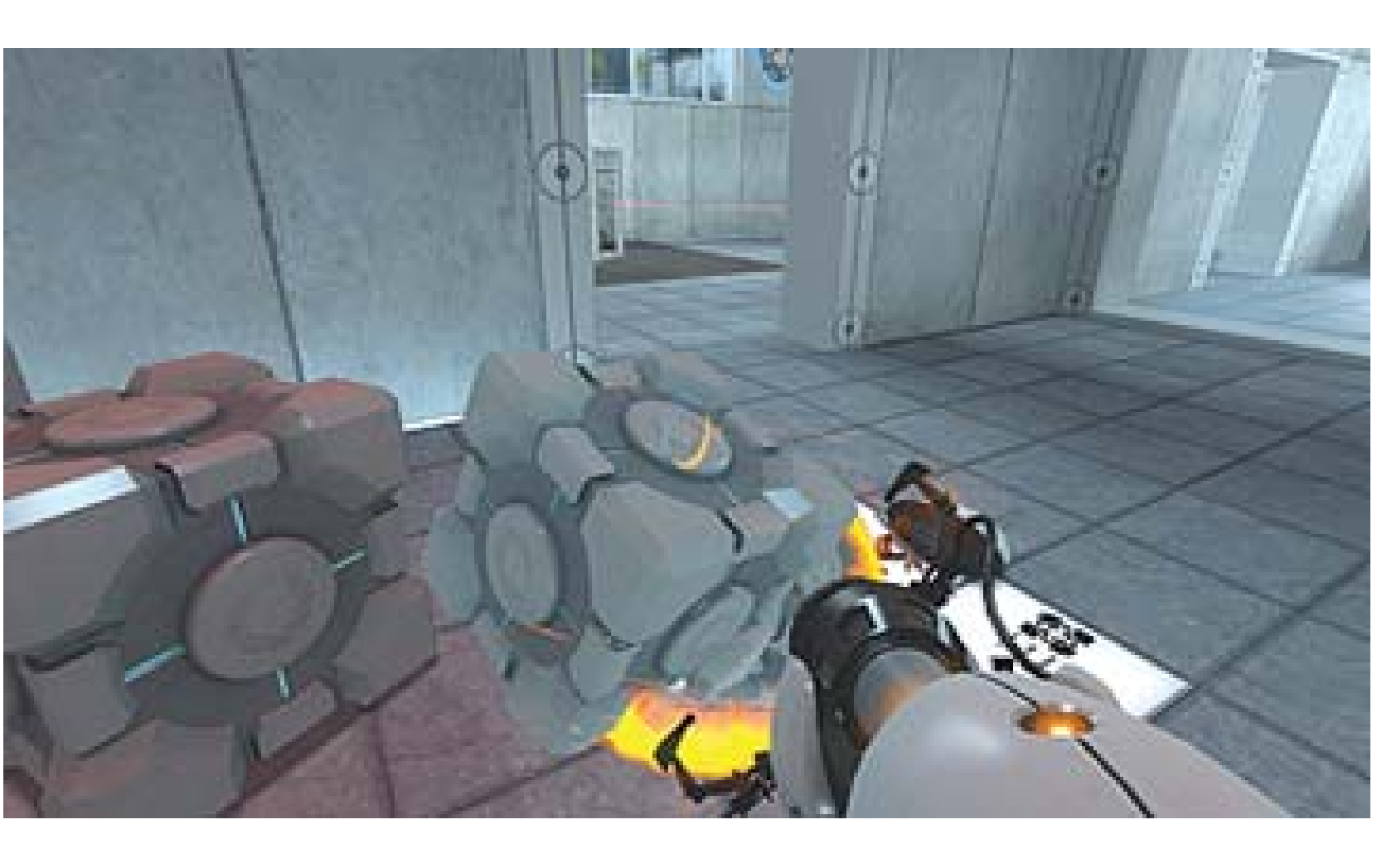
The turrets in this room, fortunately, can be avoided pretty easily, but you have to work carefully once you're in there, or they'll quite literally bite you in the rear. Aim your first portal on the far wall opposite the glass partition. Place your second on the wall behind you and hop through. You've just emerged flanking the farthest turret, well outside of their V-shaped fire zone.



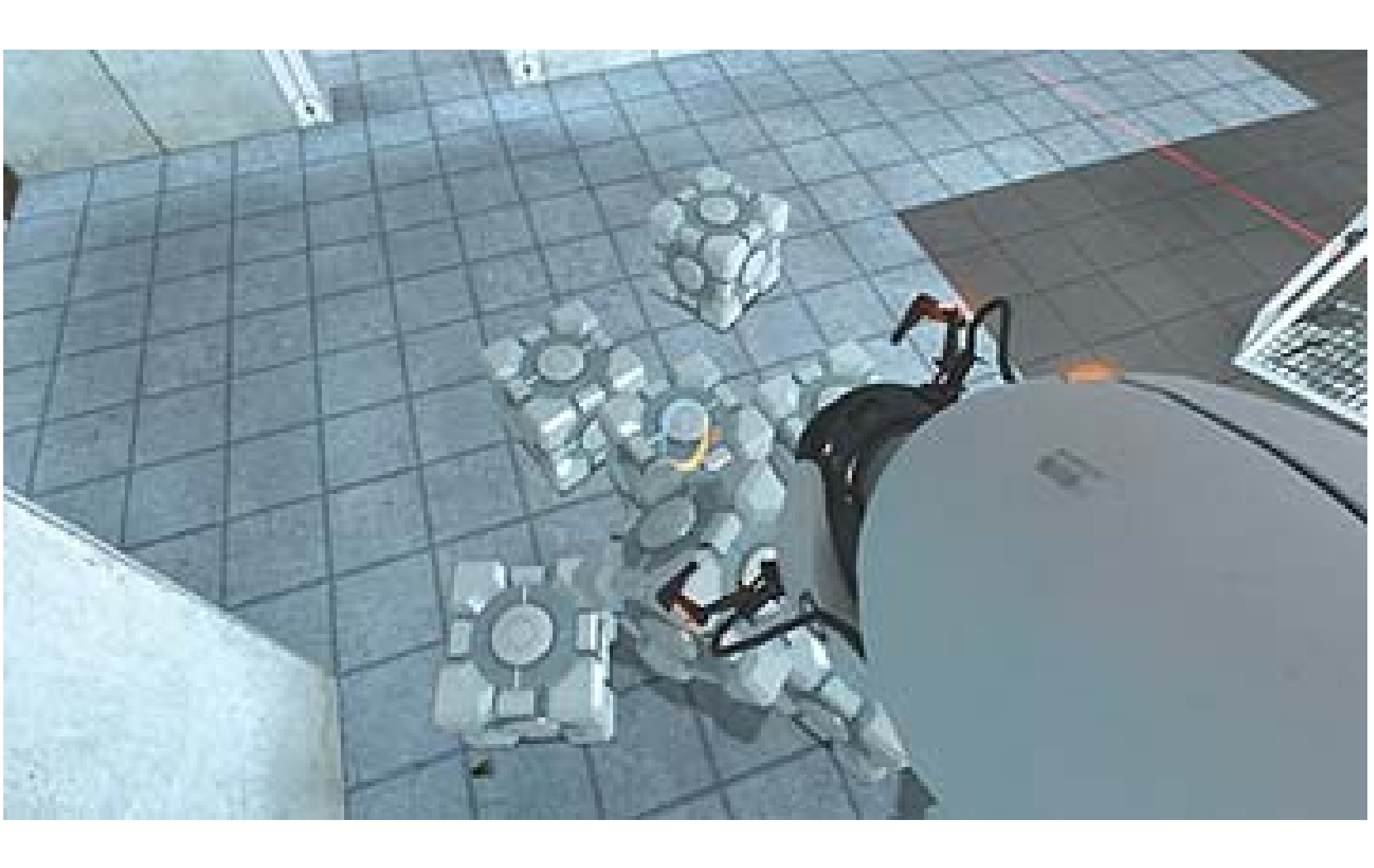


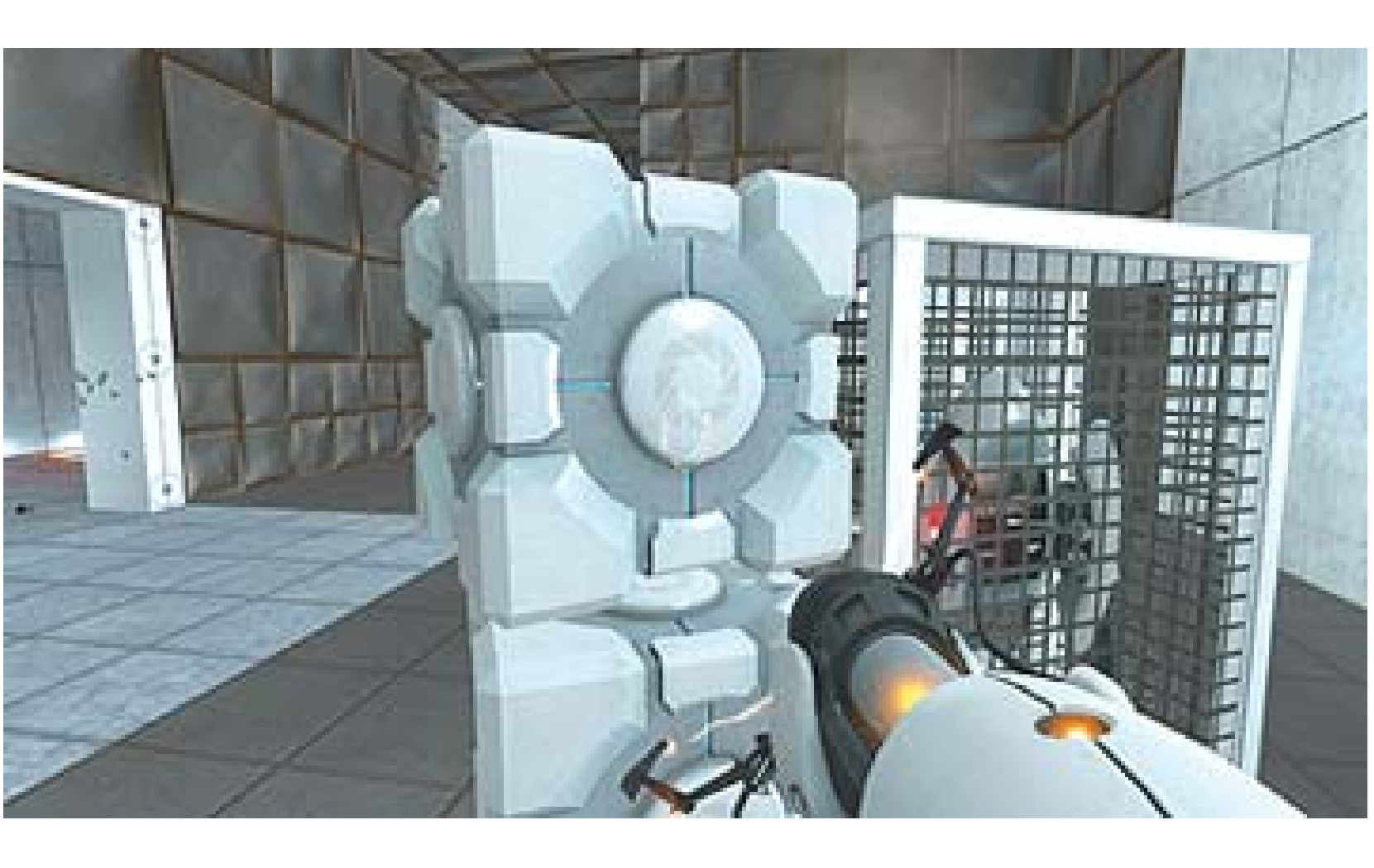
Next, place your first portal inside of the smaller room to your right—the one with all the Cubes. Place your second behind you and go through. You are now in close proximity to a bounty of Cubes.



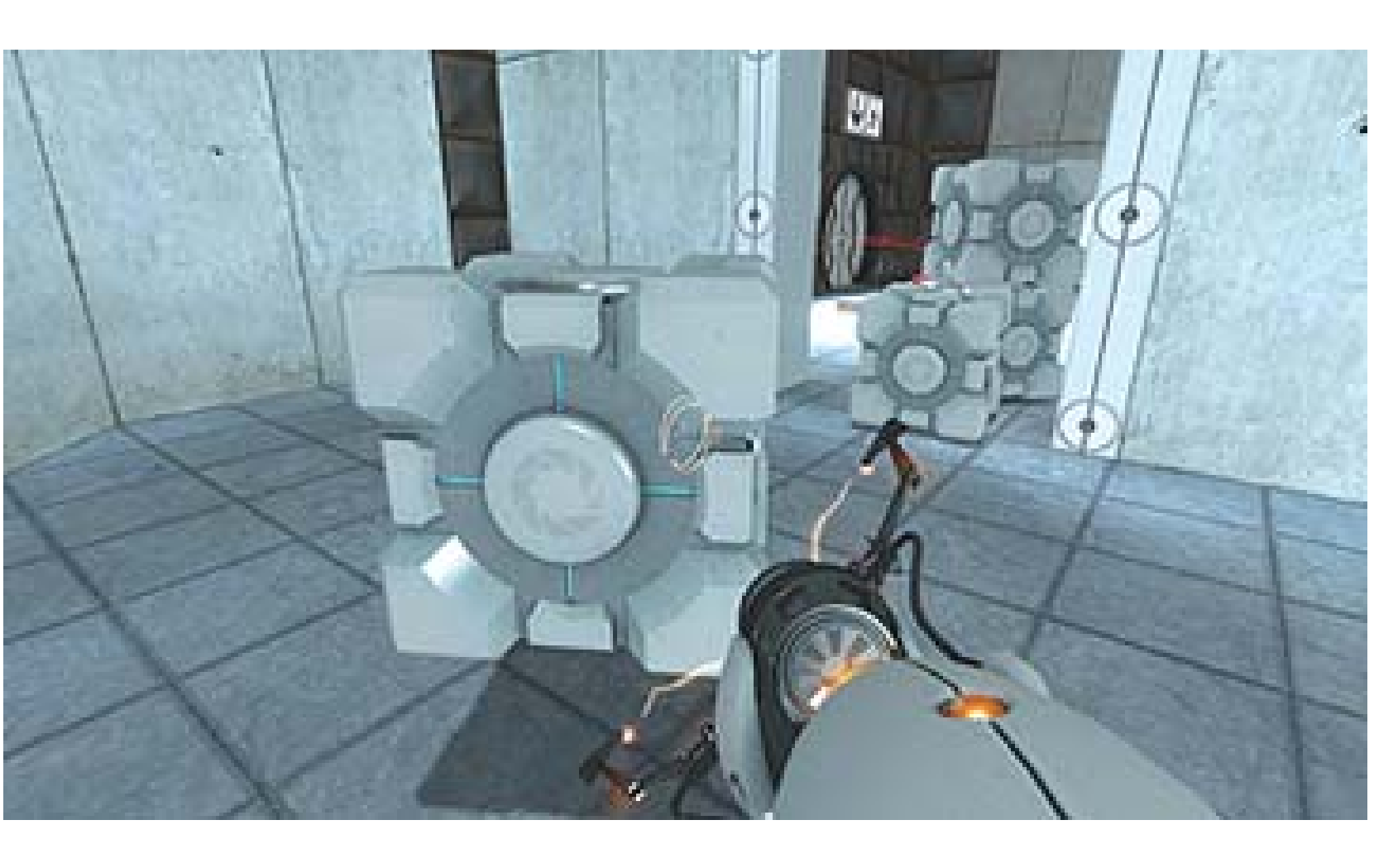


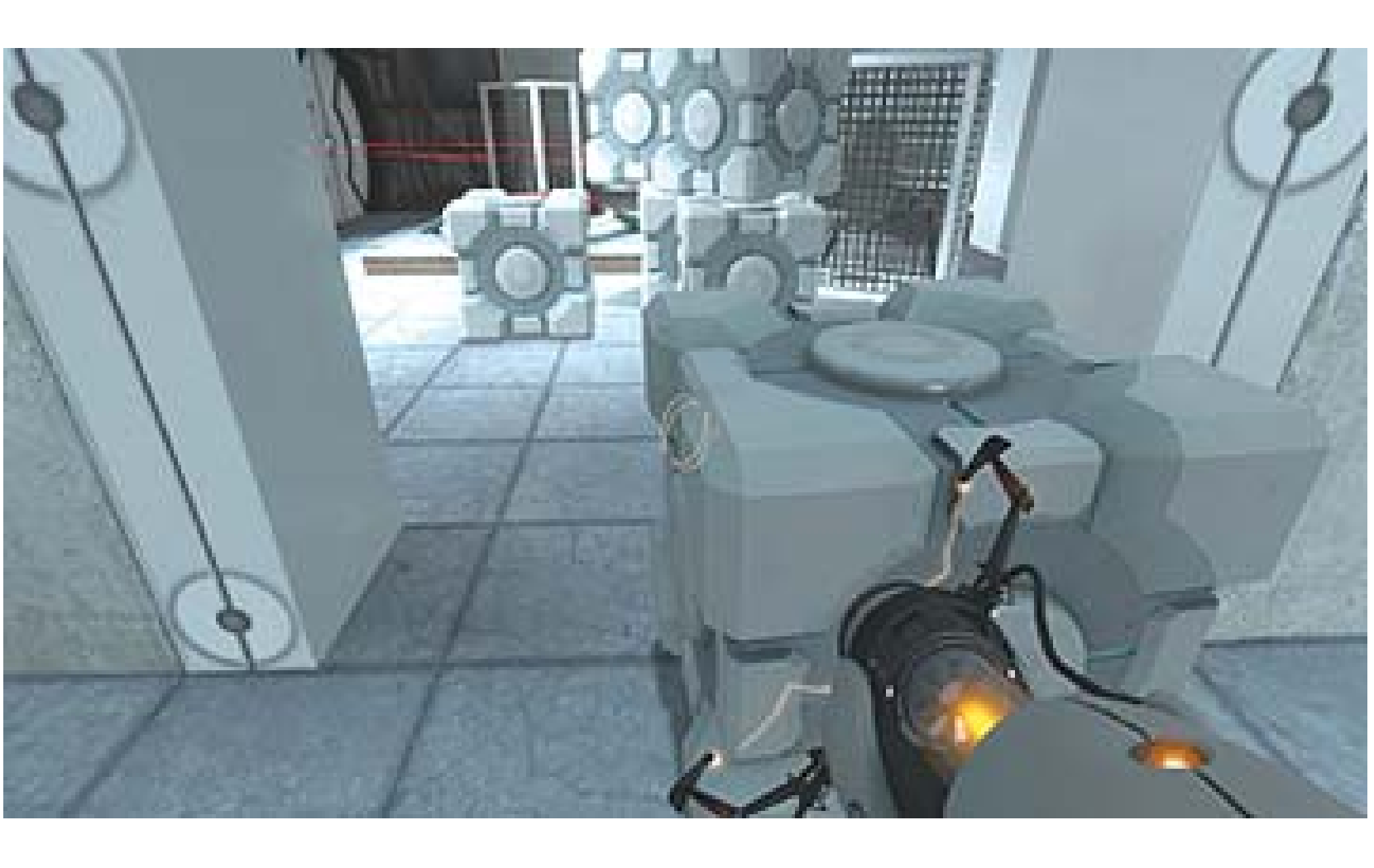
Your goal is to get all those Cubes into the room you were just in. Fire your first portal outside of the nearest turret's line of sight; aim to the right of the observation window. Use your second portal to vacuum all the Cubes through your first by repeatedly firing it below them. Collect all the Cubes in this manner. When you have, follow them out through your portal on the ground.



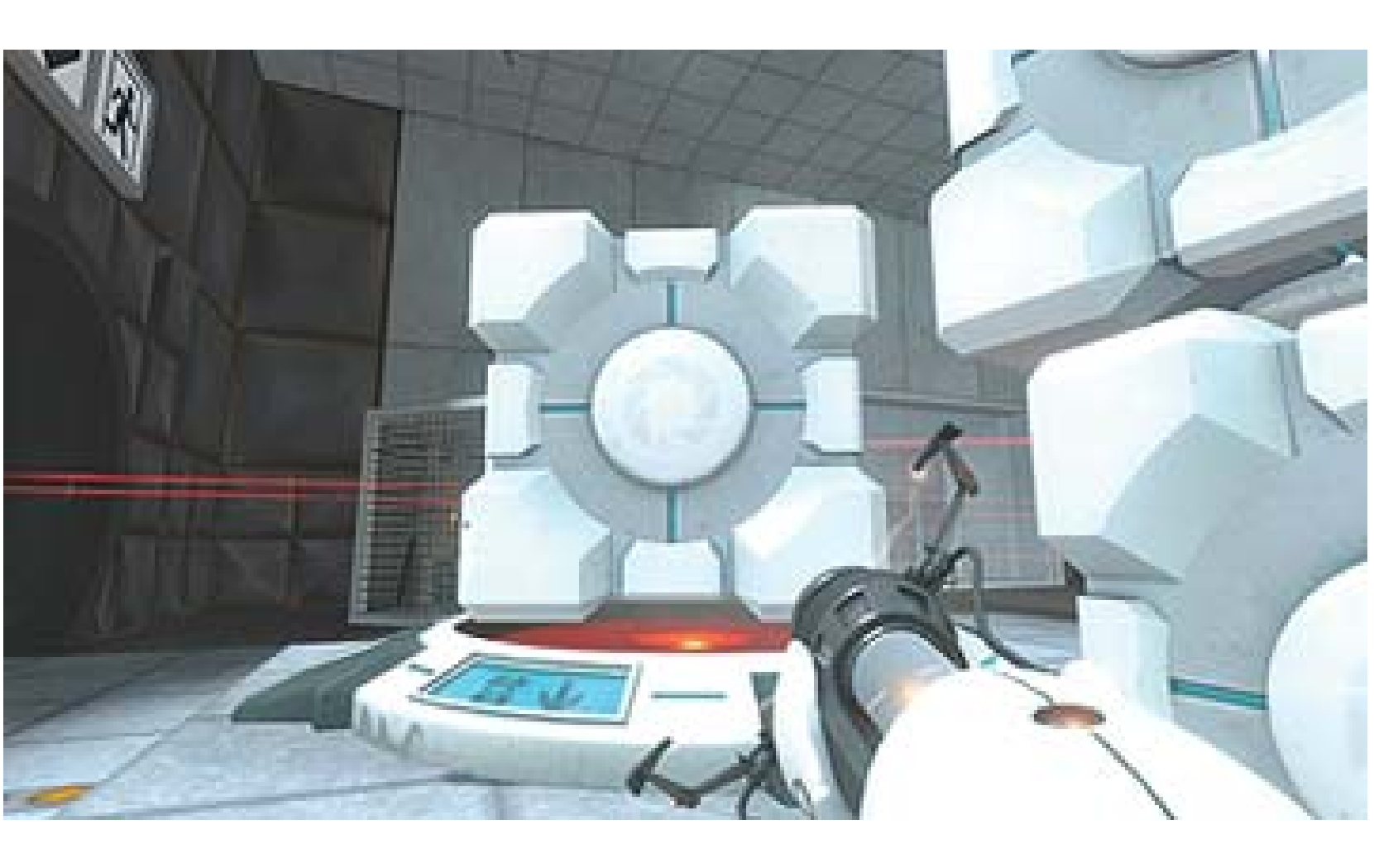


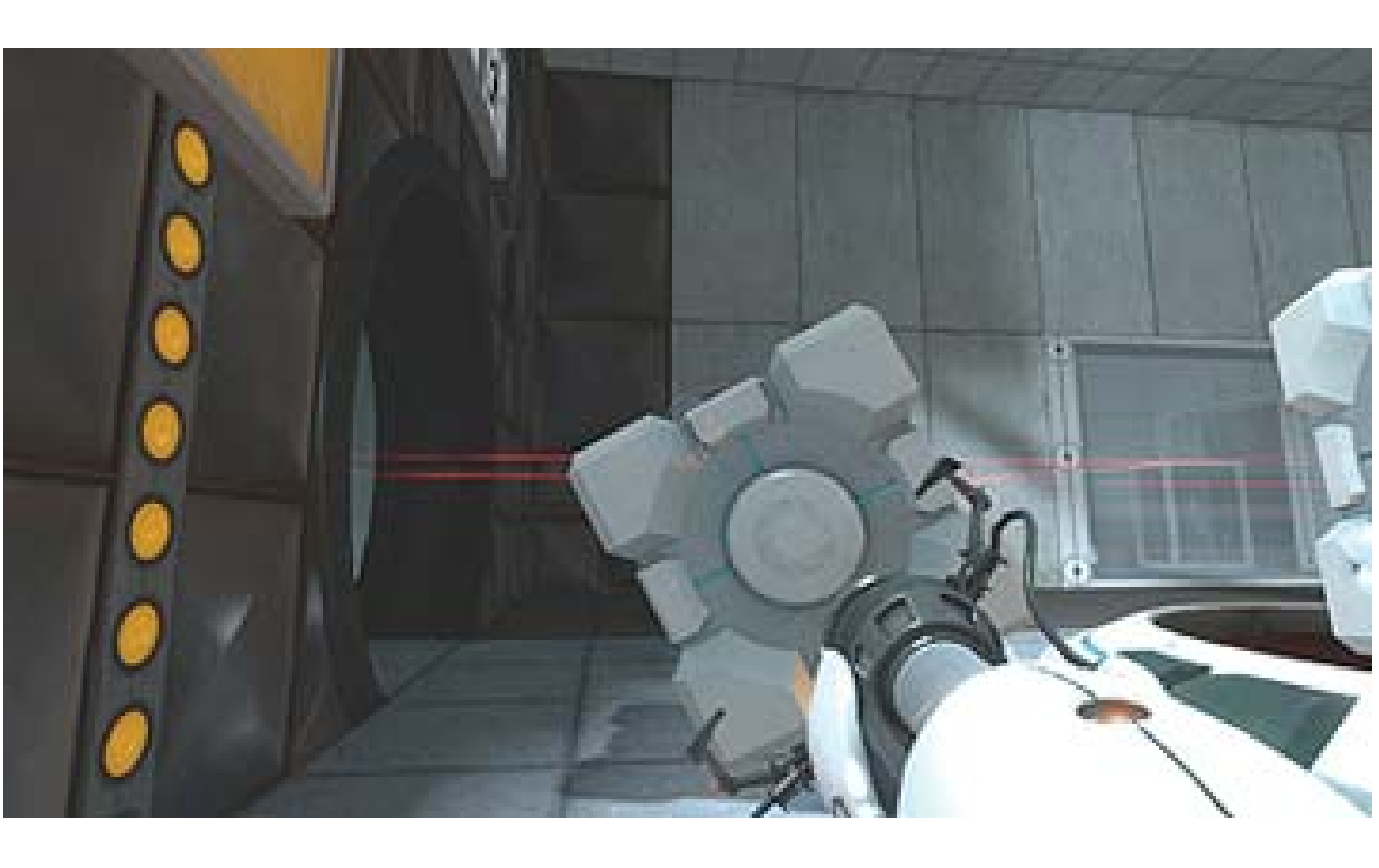
Now stack two Cubes in front of the turret closest to you in your current room. You take a few shots in the process, but the cover you've created should keep you from dying. This allows you to build an ever-so-elaborate fort in the small room to your left without taking fire.

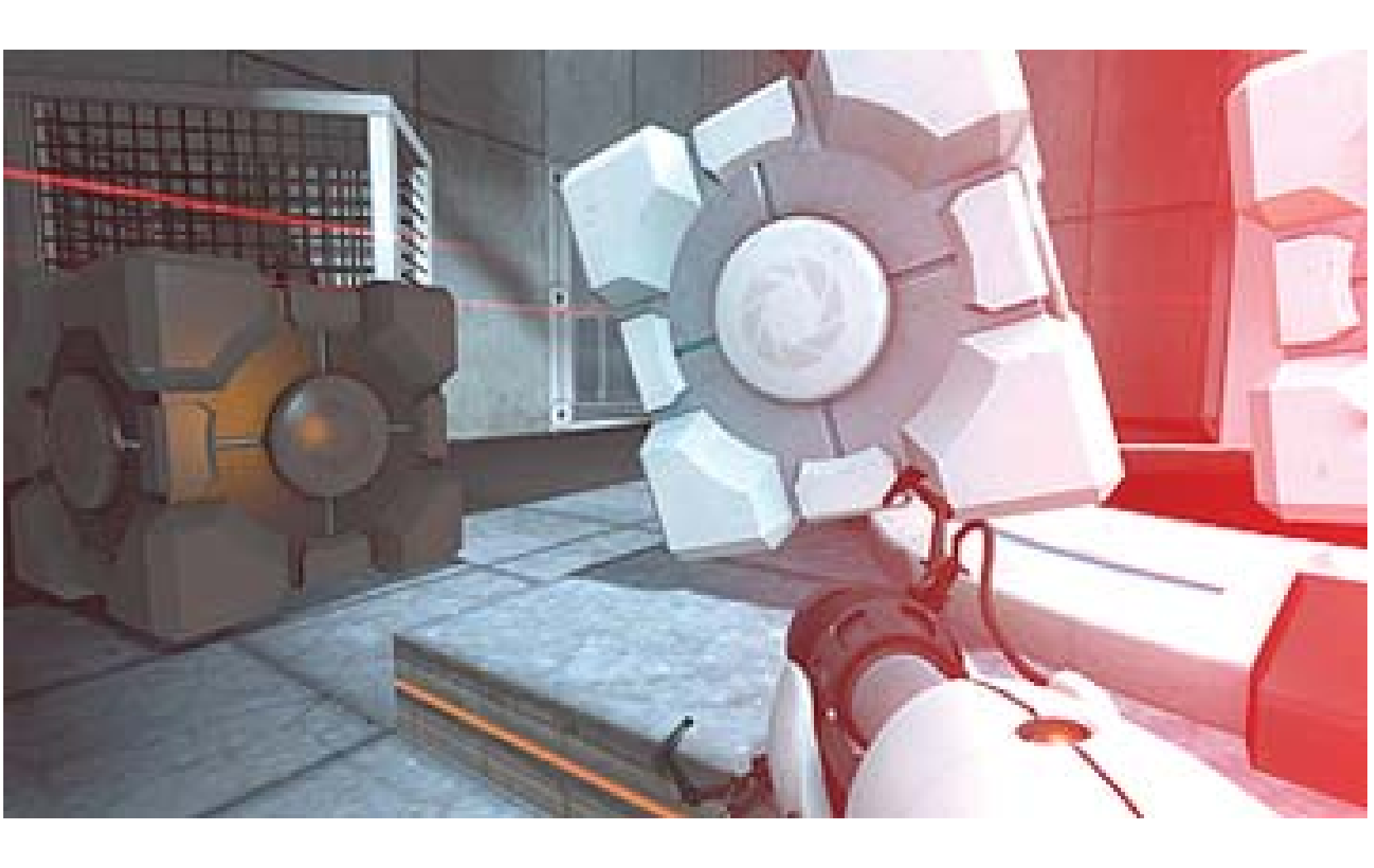




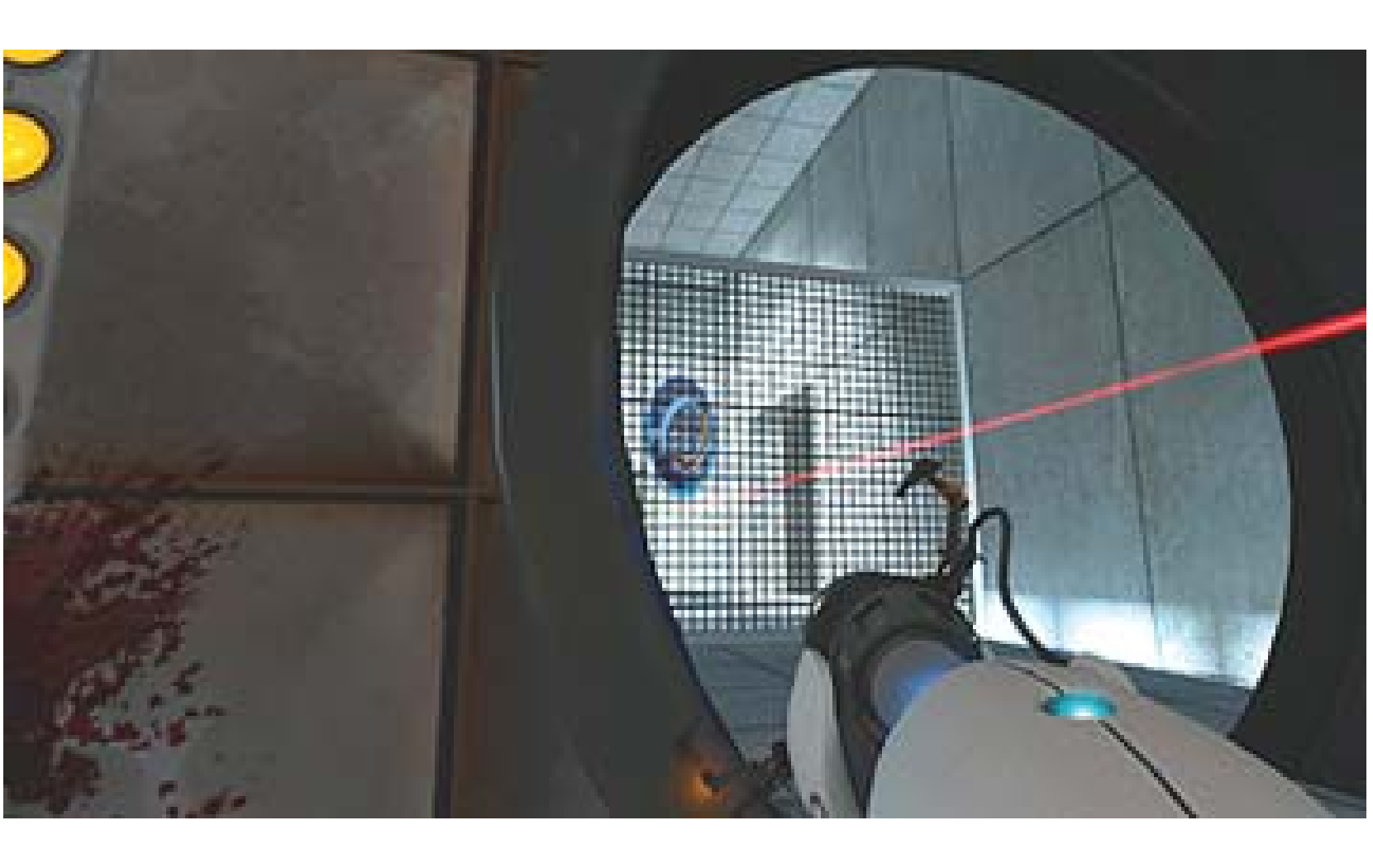
Place four Cubes, stacked two-by-two, on the entry to the small room to your left. Push all four toward the turret closest to you in that room. Grab two more and inch them close to the red button on the ground. You want them right at its base.



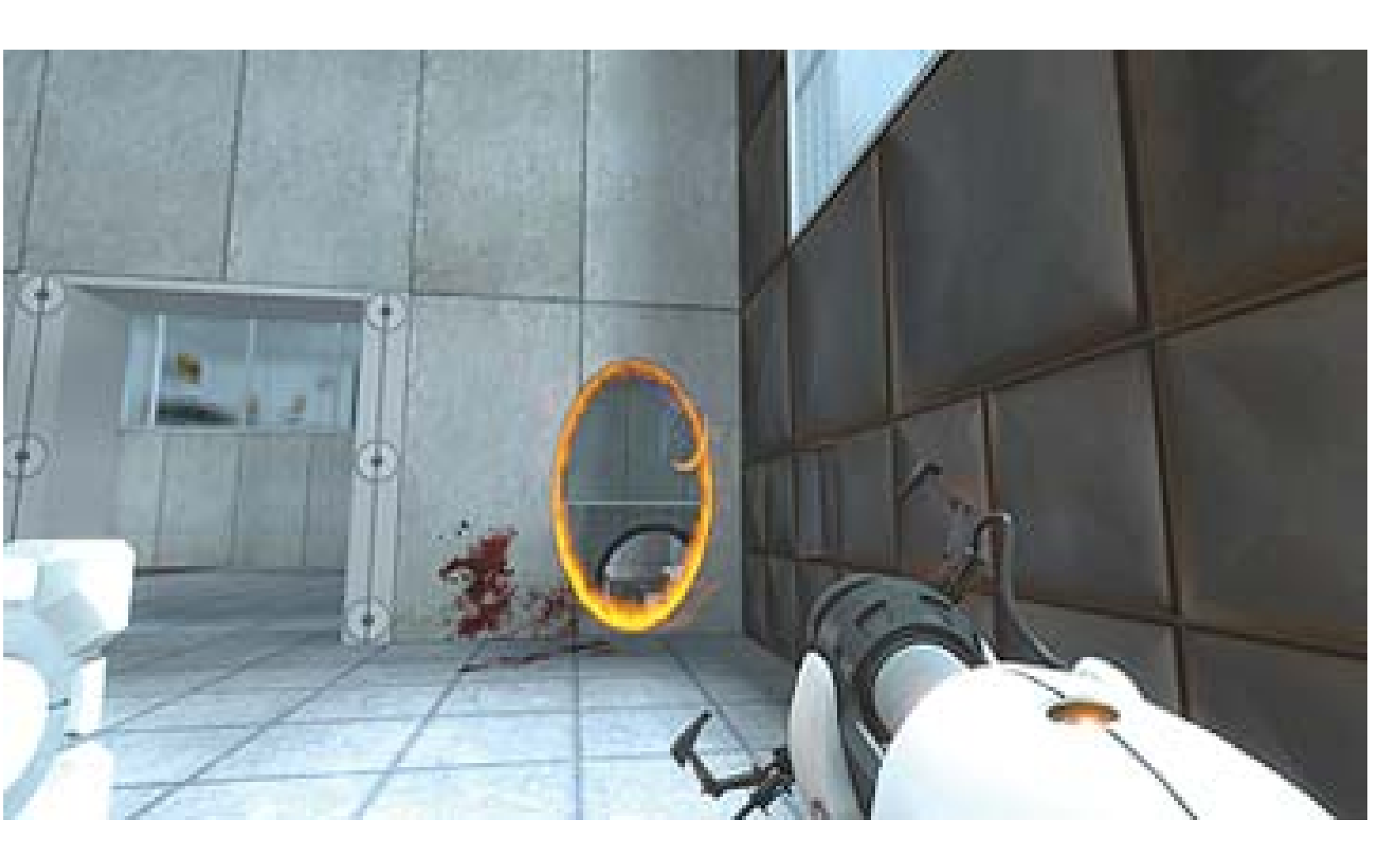


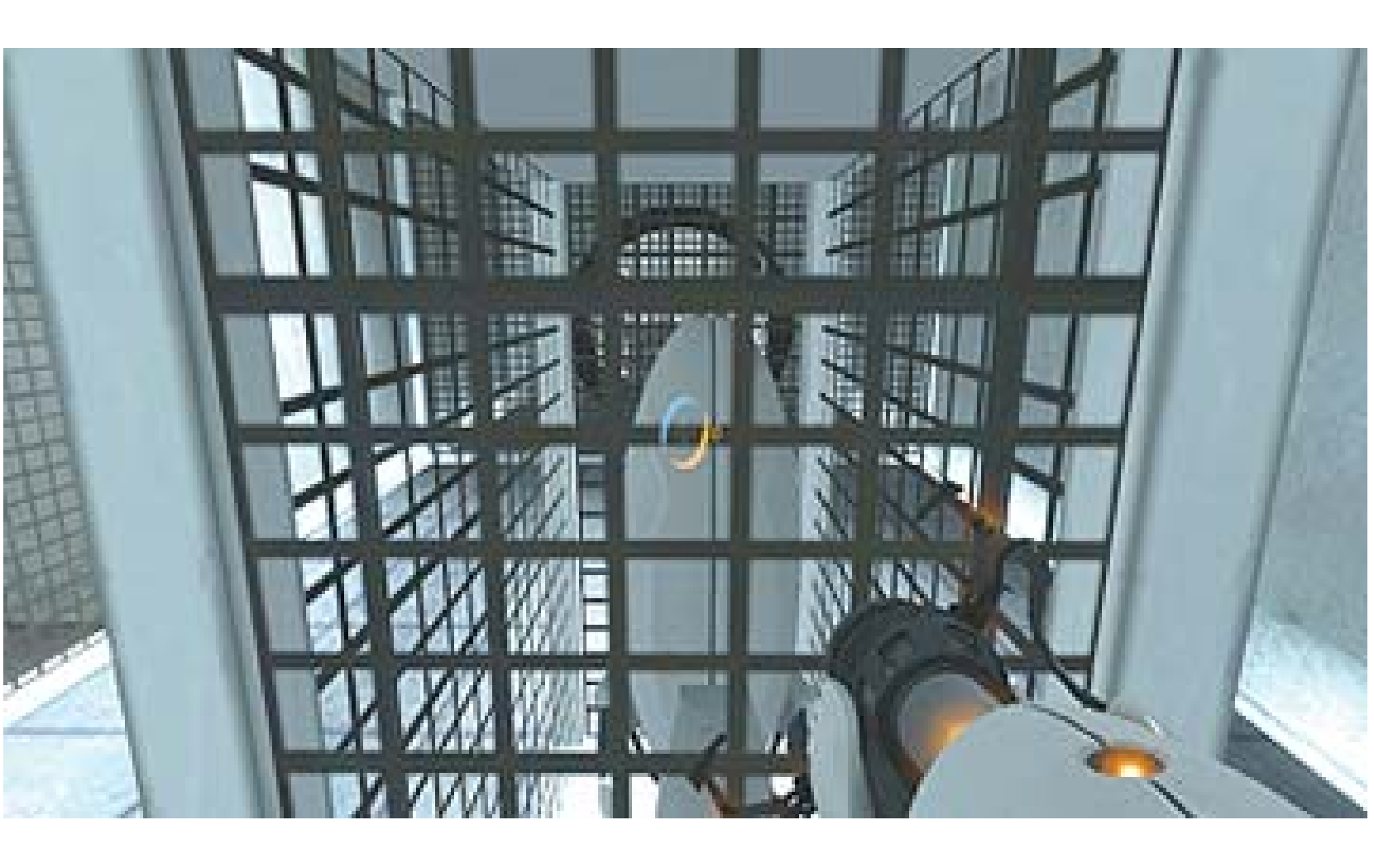


Now that you're relatively fortified, grab one of the Cubes that's blocking the first turret in the button room—one off the top, if you value your life—and place it on the button. Crouch while doing so to make yourself a smaller target. With the door now open, take a couple more Cubes and arrange them around the base of the button in a manner that will shield you from the second turret's fire. Remember to crouch while doing so.



Now fire your first portal through the open blast doors. While crouching, you have a vantage that allows you to work without coming into contact with the turret on the other side. Fire your second portal on the wall to your left. The turret opposite the one you're about to bypass has you in its laser sights through this portal, so move quickly and carefully. Make your way into it, and take cover behind the turret in front of you as soon as you emerge.





Turn a few degrees to your left, and fire a portal through the mesh. Fire your second one behind you, and back into it. You'll emerge flanking the last turret. Simply go around it from behind and evacuate the Test Chamber.

Note

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- **Portals:** Use the fewest portals possible to complete a Test Chamber.
- **Steps:** Take the fewest steps possible when completing a Test Chamber.
- **Time:** Complete a Test Chamber as quickly as possible.

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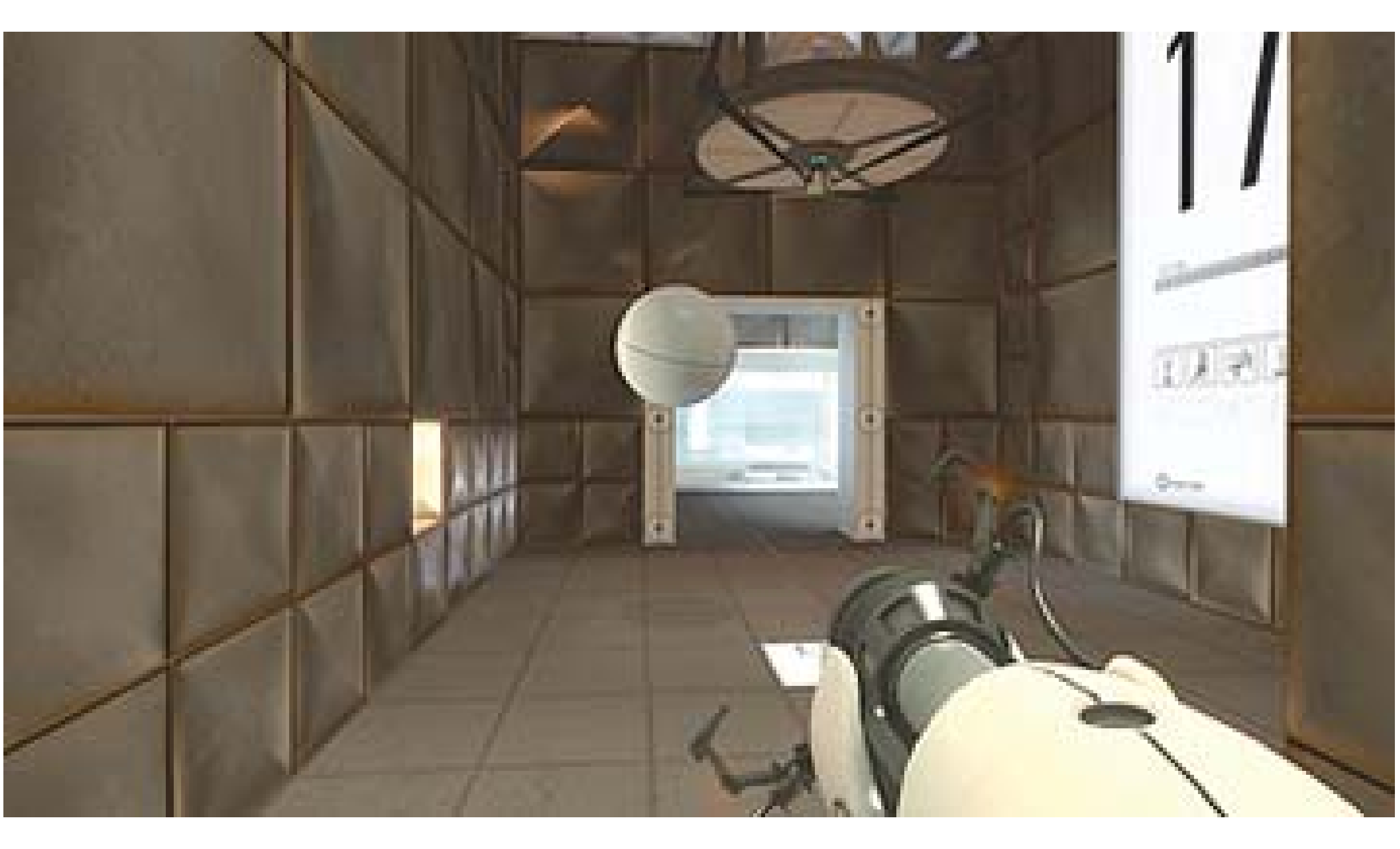
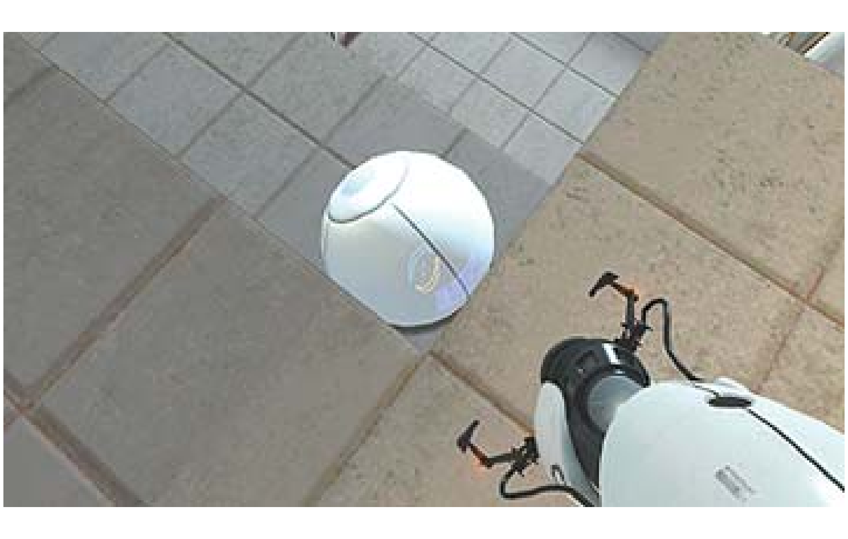
Advanced

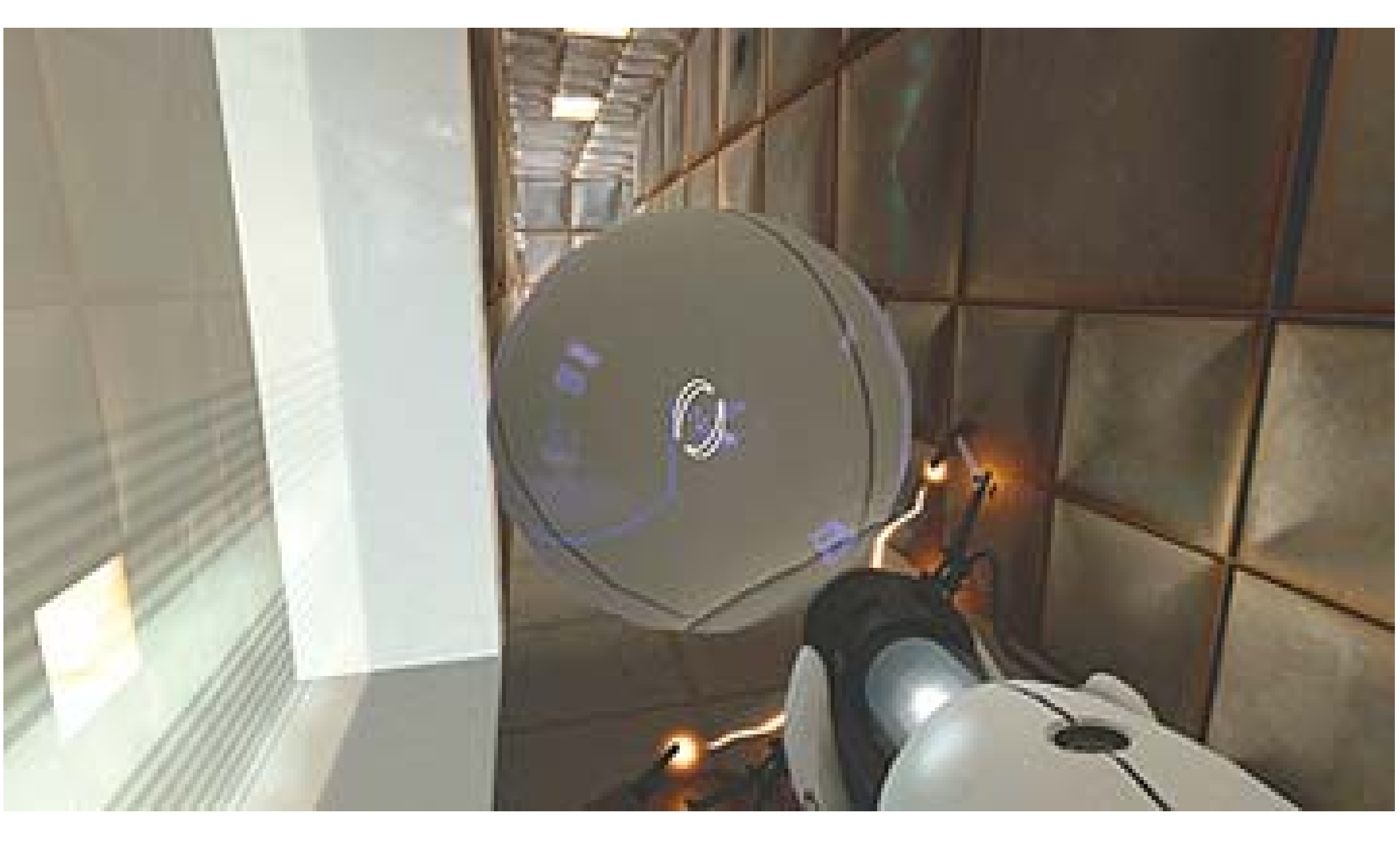
Advanced Chamber 17

Advanced Chambers are modified versions of Test Chambers 13 through 18 that become available after you've completed the game. They've been tweaked to be much more difficult than their normal counterparts, so pay heed to the precise strategies provided here!

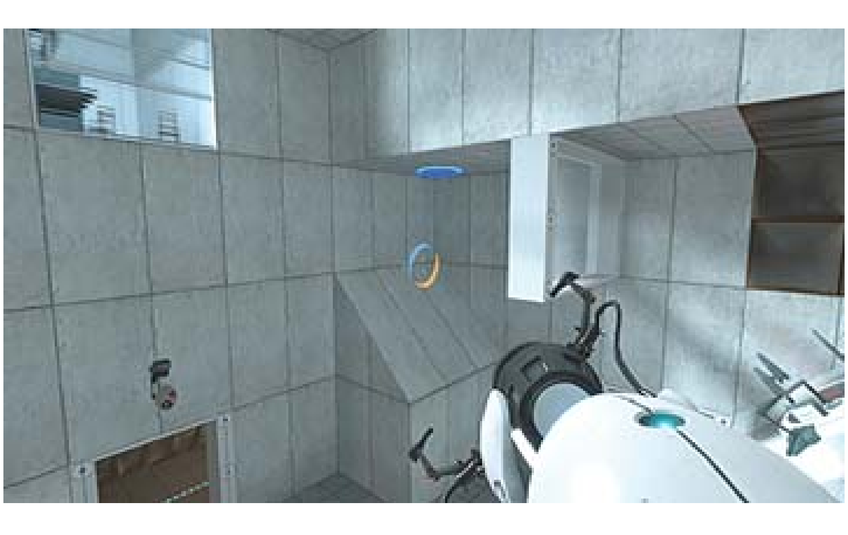


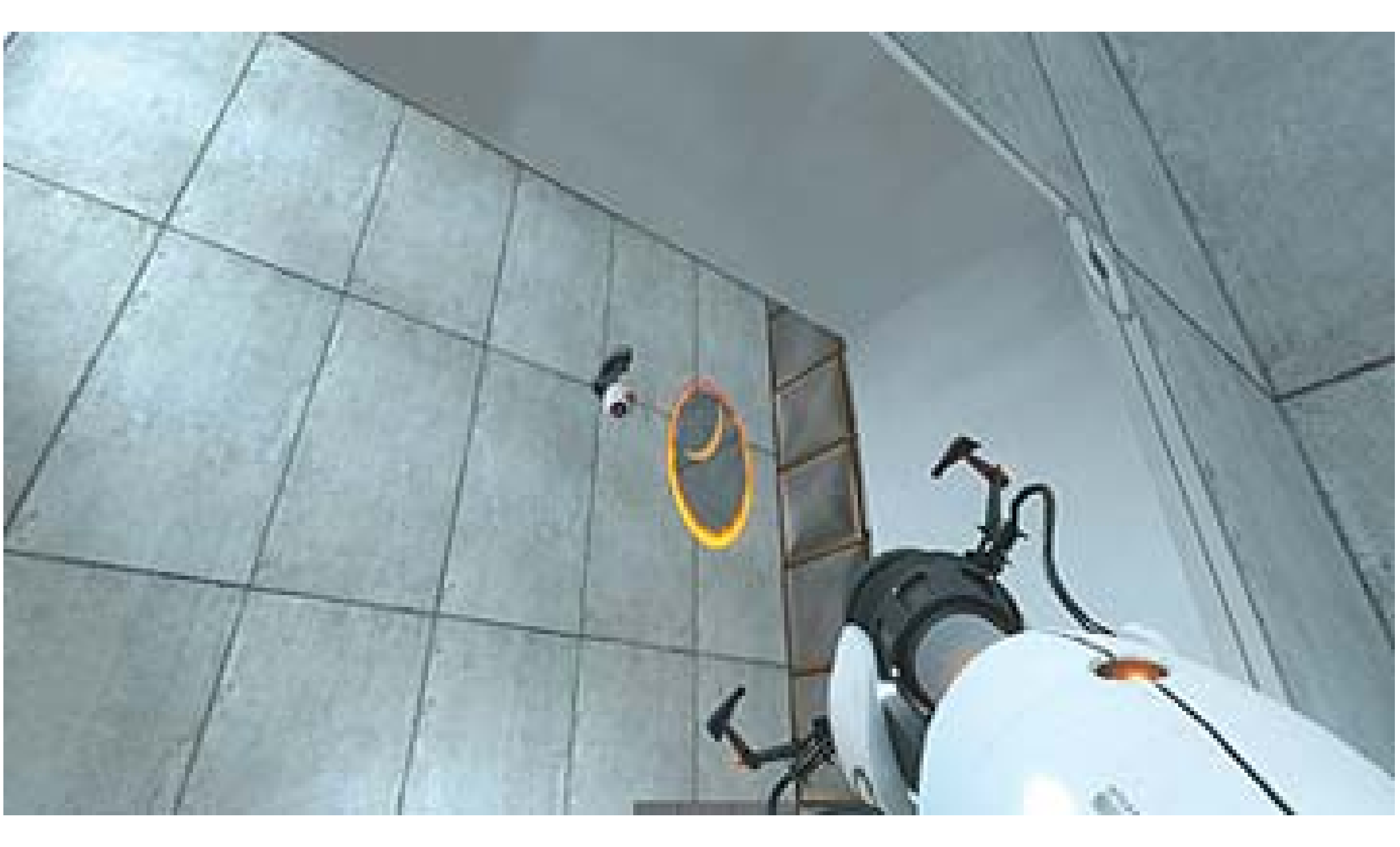


You notice a big difference upon first setting foot in the advanced version of Test Chamber 17: the Weighted Companion Cube is, in fact, a Sphere, which presents some complications, the least of which is that it doesn't stay put when you set it down. Seize the Sphere after the Vital Apparatus Vent dispenses it, and use it to climb the unjumpable steps.

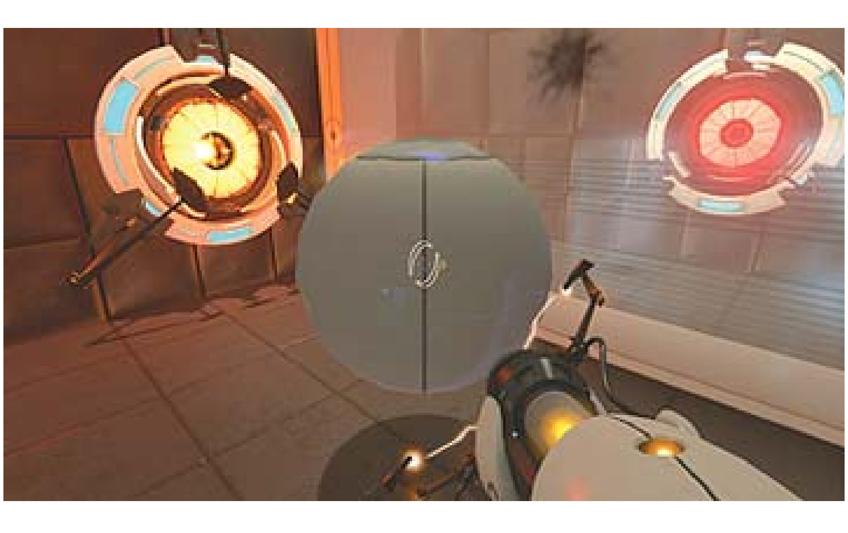


Use the Sphere to shield yourself from the energy balls as you traverse the twin hallways to the main chamber. Notice it deflects the energy balls in a much more erratic pattern than the Cube did. This will cause you a couple of headaches later.

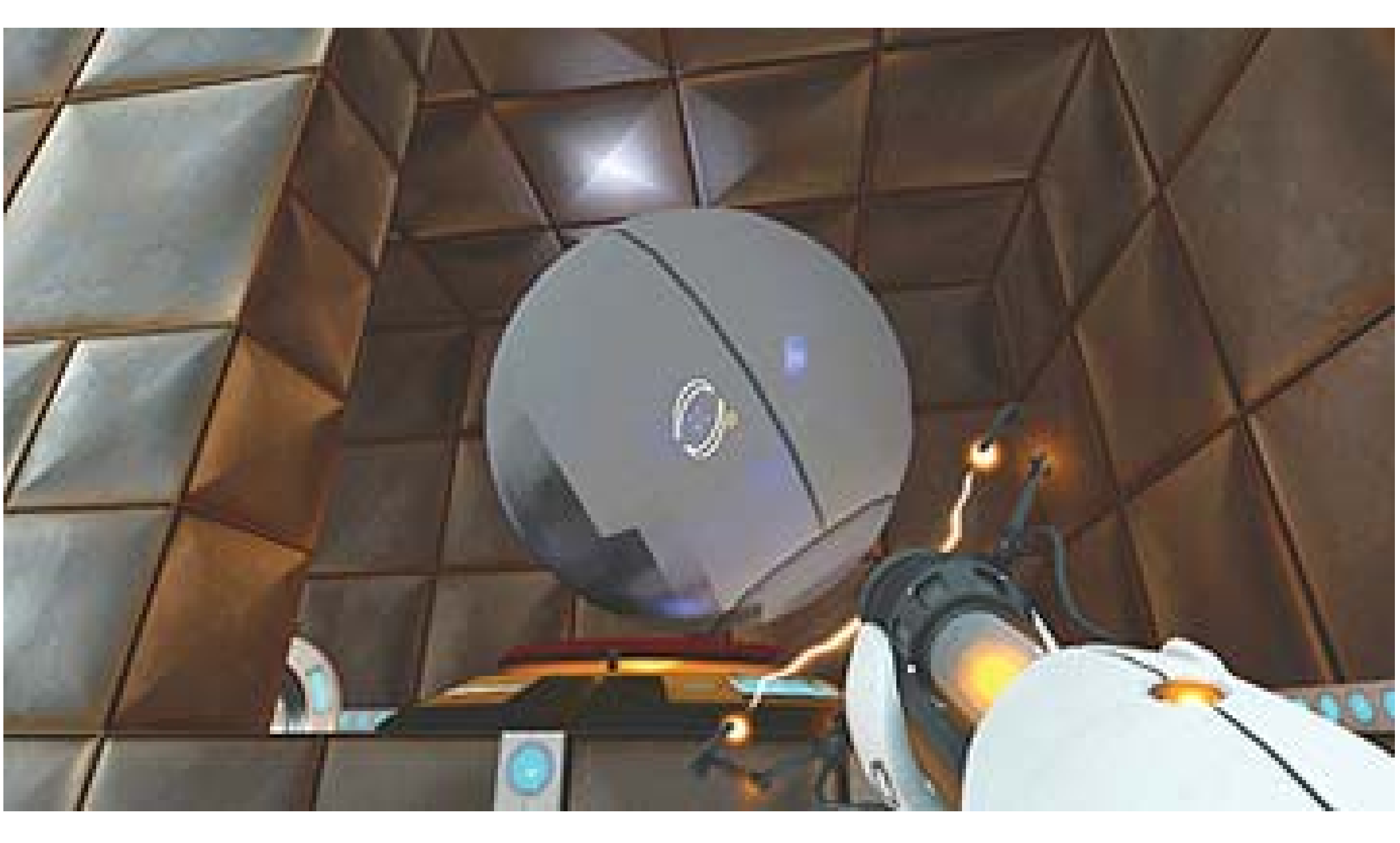




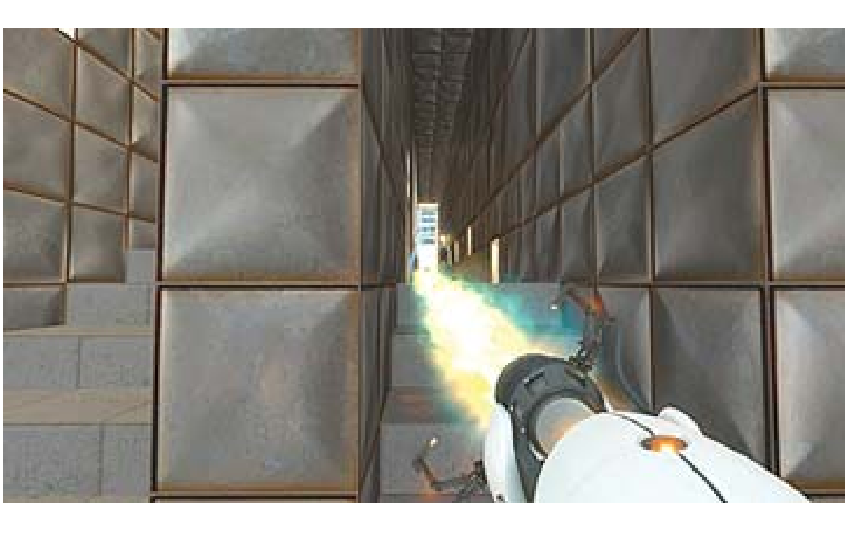
When you get to the main chamber, it's time to activate the first lift. The order is different from what you remember from normal mode, however. First, set the Companion Sphere aside somewhere you're fairly certain it won't roll away. Then place your first portal on the ceiling above the slanted protrusion opposite the Ball Catcher in front of the button room. Place your second portal where the energy ball makes contact with the wall in the hallway nearest to you. This activates the first lift.

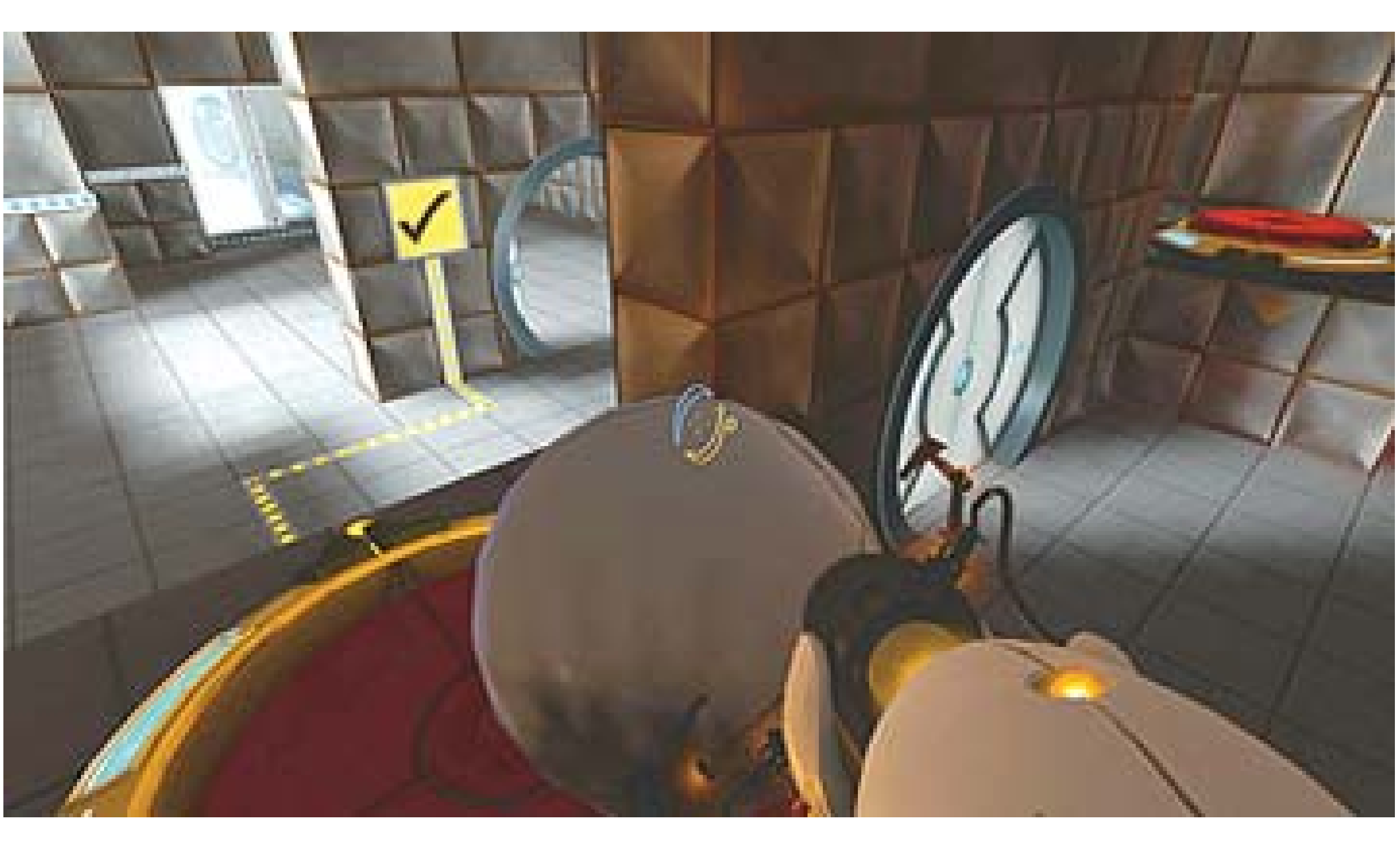


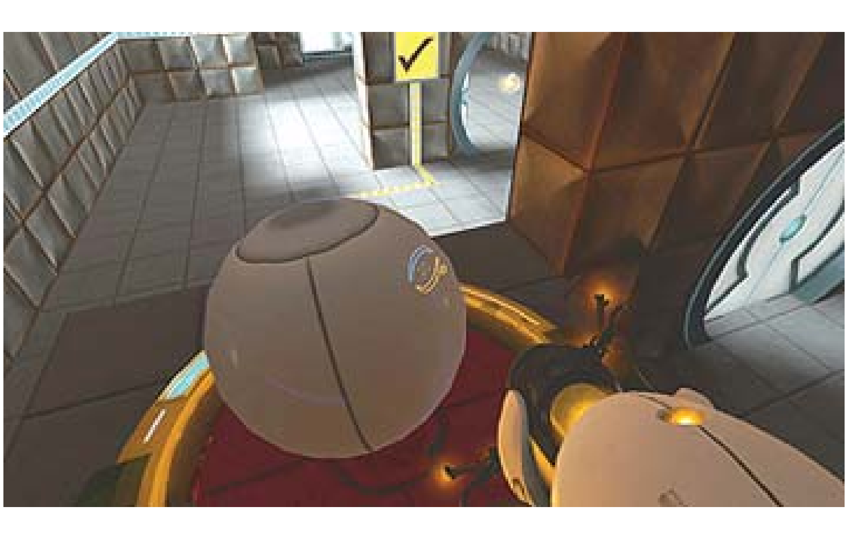
Next, retrieve your Companion Sphere and go to the room below you to your left. There's a glass wall in between the Launcher and Catcher. This, compounded with the fact that your Cube is now a Sphere, makes solving this puzzle quite tricky. It ultimately boils down to trial and error (and possibly a few deaths), but it helps to crouch a few degrees to the left of the Launcher, and hold your Sphere at the point where the Launcher and Catcher meet at a right angle. Play with your positioning until you get it right. No one said advanced mode was going to be easy!



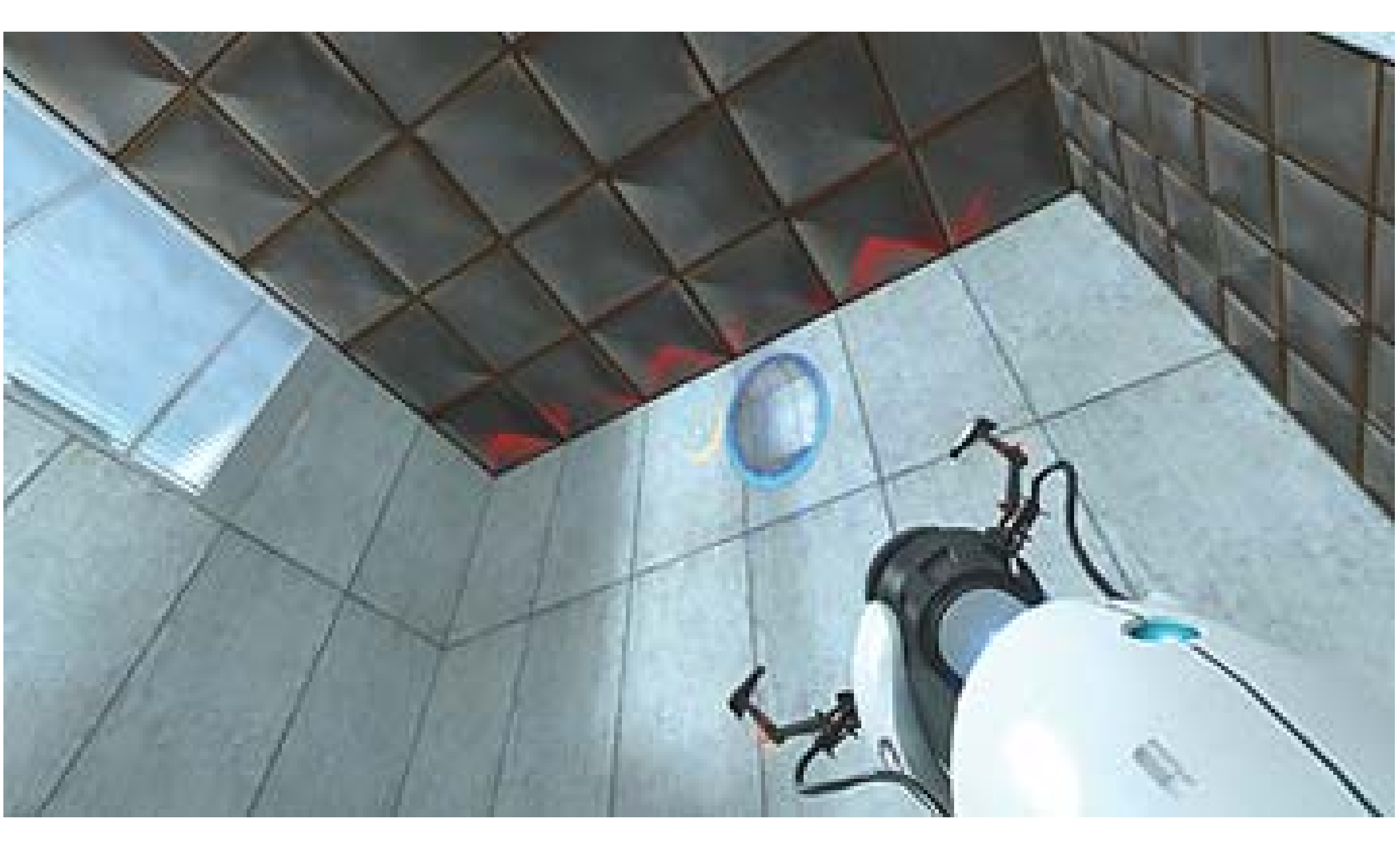
After you get the ball in the Catcher, make your way to the button room. It has changed quite a bit as well. There's no button near the entrance; instead, both of the buttons you need to depress to feed the Catcher are on either side of the second shuttered door. Place your Sphere on the right button (when your back is to the entrance) and exit the room.



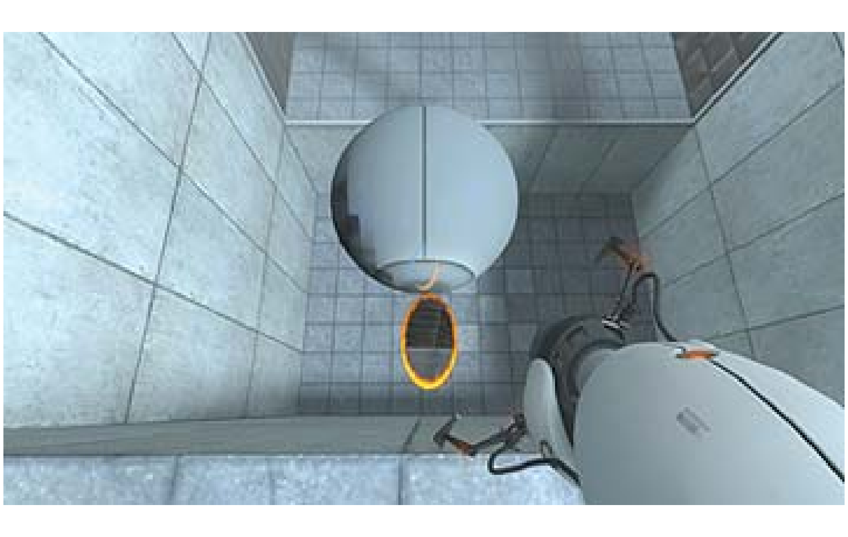


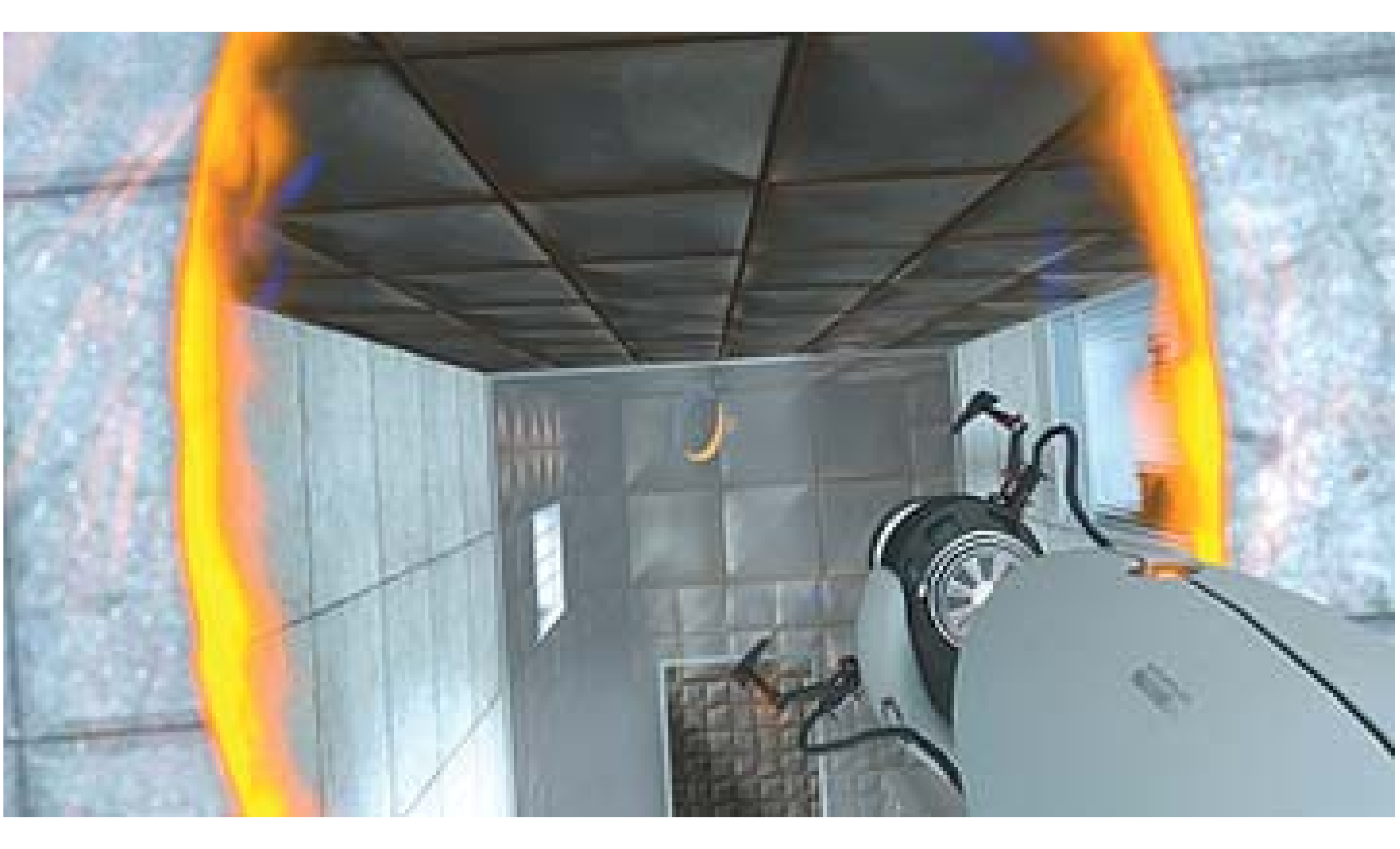


Portal your way back to the first hallway leading into the main chamber, then aim your first portal where the energy ball impacts the wall. Place your second on the protruding panel facing the button room, same as you did in the normal version. Now go back to the button room and wait until the energy ball passes through the first open doorway. It helps to give yourself a good vantage from behind the right-hand button. When it's clear, remove the Sphere from the button; this traps the ball between both shuttered doors. Next, quickly place the Sphere on the left button to open the second door and allow the energy ball to reach the Catcher. You've just activated the third and final lift.

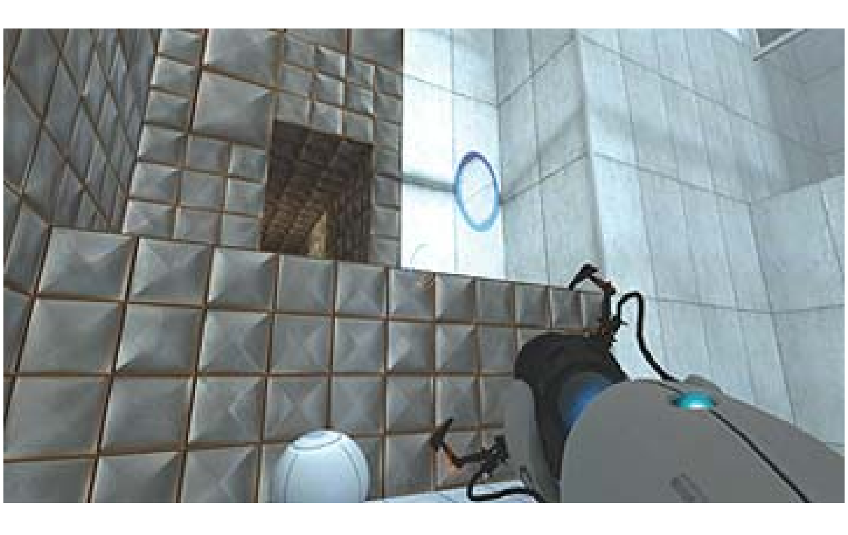


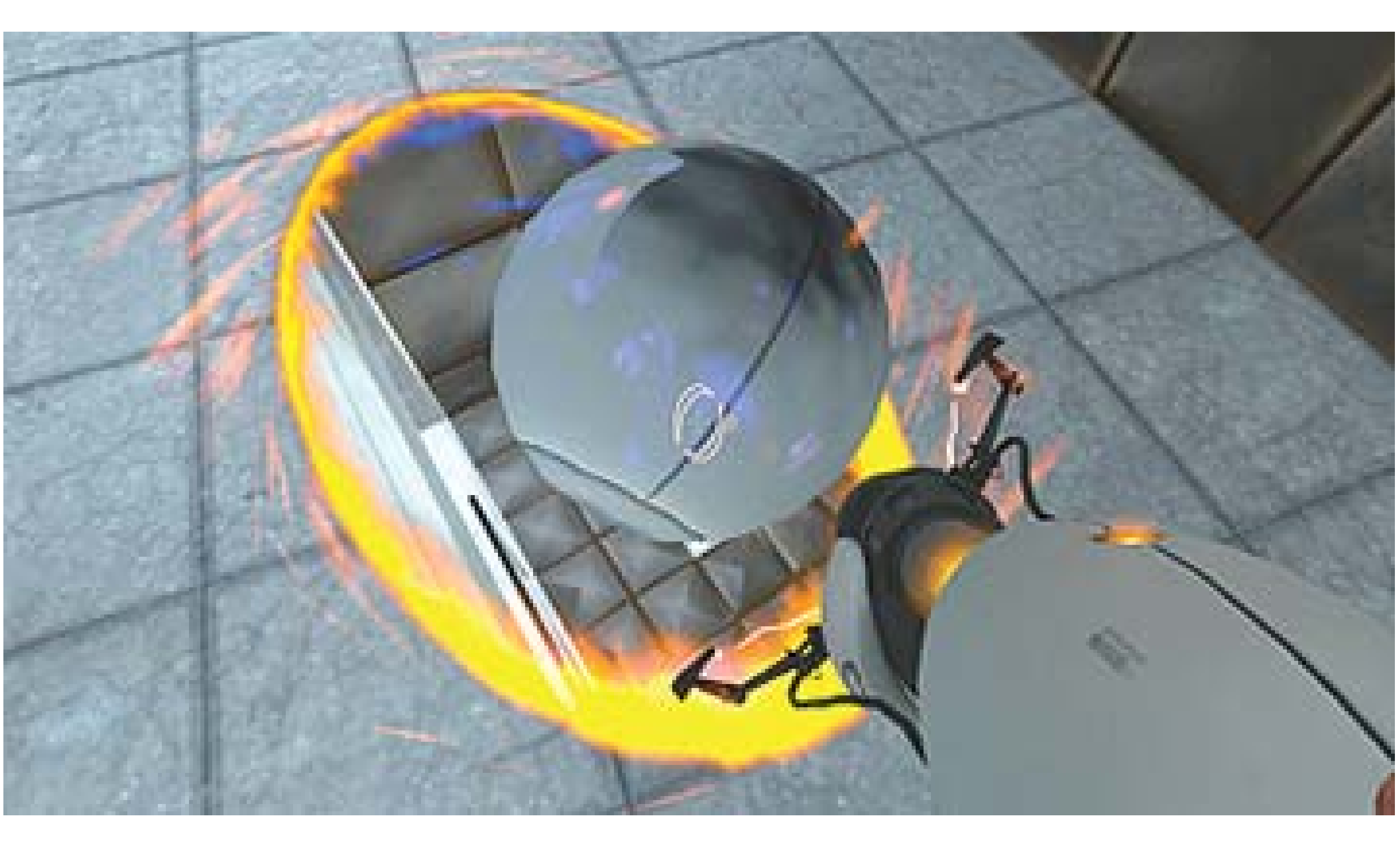
Exit the button room, portal yourself to the ledge on the main chamber, and don't forget your Sphere. Traverse the platforms created by the activated lifts, and proceed to the next chamber. You won't be incinerating your dear friend just yet, though; there's an all-new puzzle in Test Chamber 17's advanced version, and it's a killer.



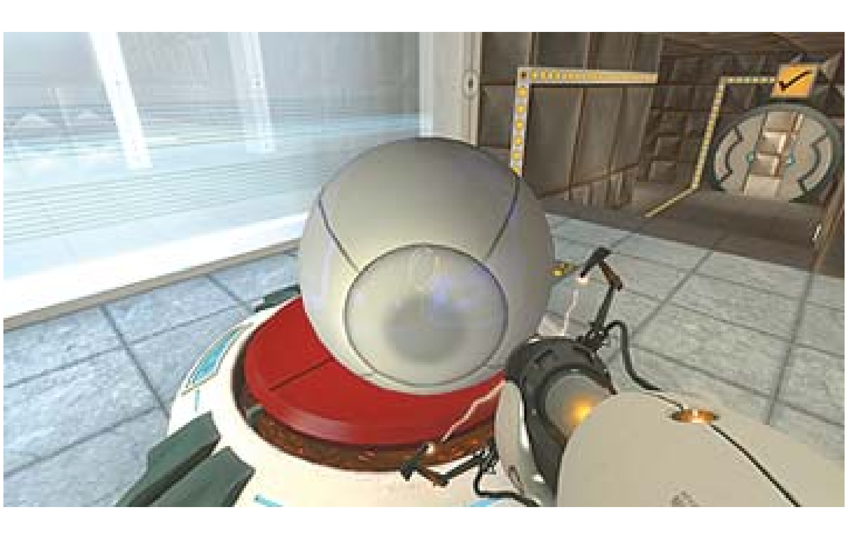


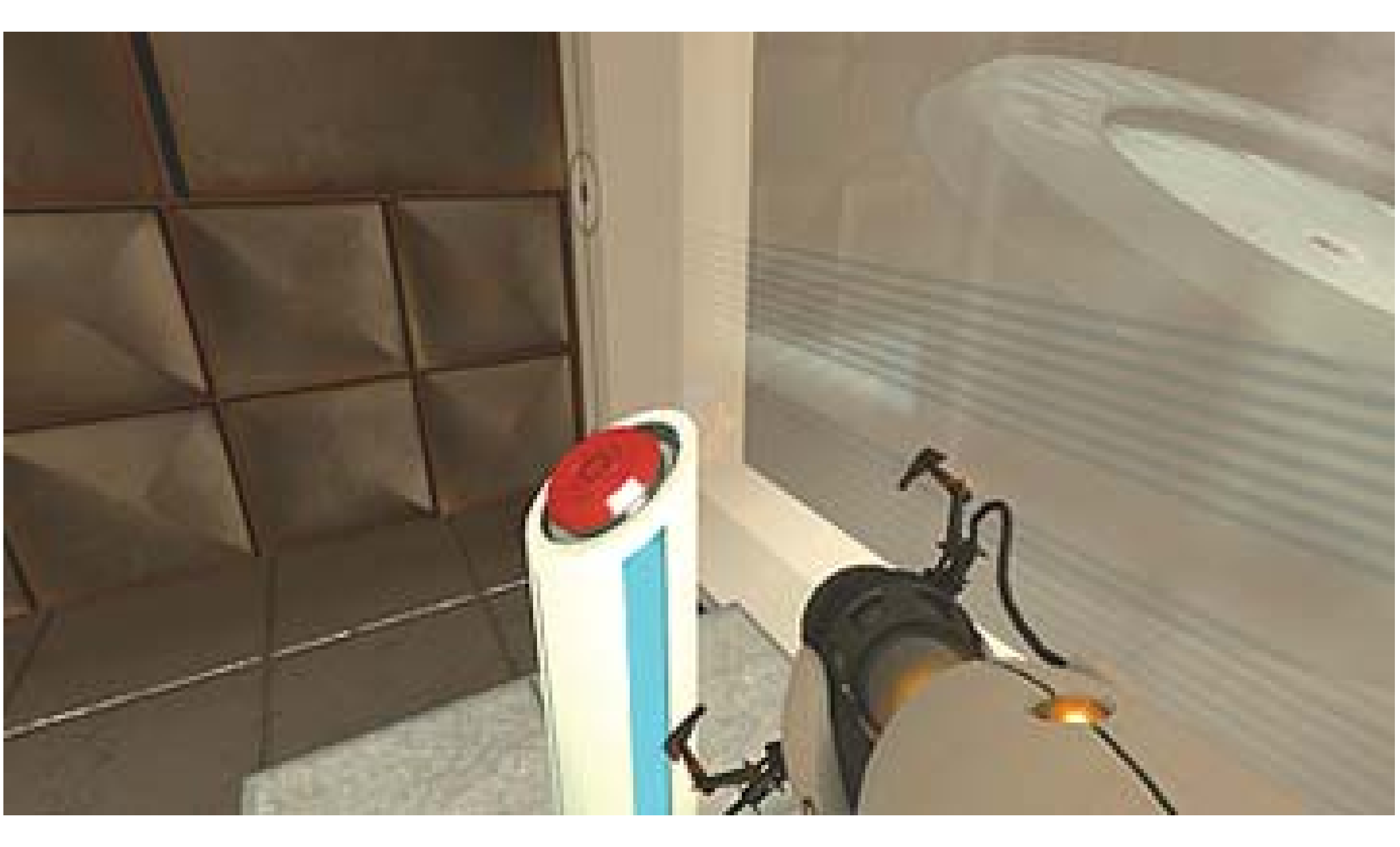
Before you is a deep pit whose far wall is made of glass, with a rectangular chunk cut out of its center. Get ready to shoot some hoops, as it were. Place your first portal on the high on the wall above the entrance, then place your second in the pit, about a floor tile's width near your edge. Hurl the Sphere through, then dive in after it. Both you and your Sphere have flung to the other side of the pit.



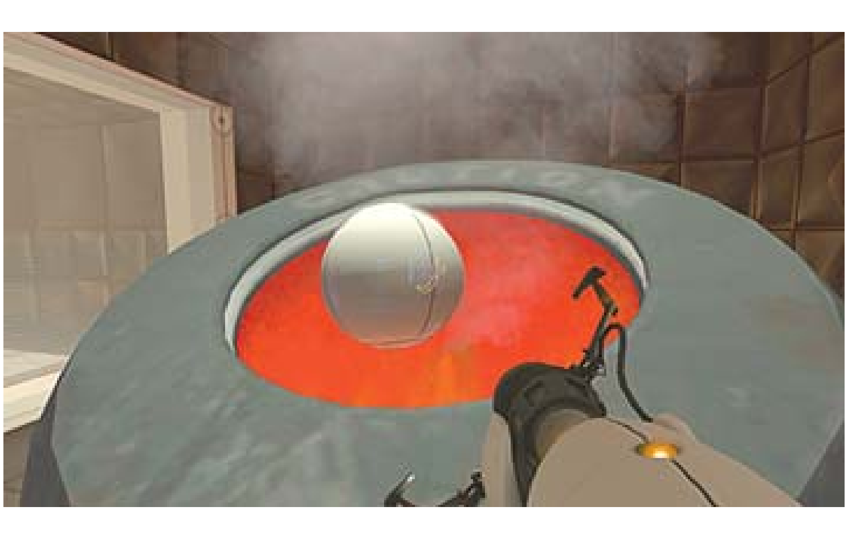


Place your first portal on the suitable stretch of wall next to the threshold on the ledge, and tow your Sphere through your second. It is now time for the incinerator.





The Sphere's final service to you is to hold down the button that facilitates its annihilation. Set it down, hit the switch behind the door, and do your dirty deed. Although you know that the Companion Sphere's demise was not in vain, this doesn't make it any easier to take. However, you may find solace in the fact that you have just completed the penultimate advanced chamber.



Note

Portal Challenges become available after you've completed the game, and they allow you to tackle Test Chambers 13 through 18 with a host of daunting restrictions. There are three types:

- **Portals:** Use the fewest portals possible to complete a Test Chamber.
- **Steps:** Take the fewest steps possible when completing a Test Chamber.
- **Time:** Complete a Test Chamber as quickly as possible.

While these challenges are strictly for the hardest of the hard core, we've provided strategies straight from the creators themselves to give you a boost. Apart from practice, discipline, dexterity, and timing, this is the most significant advantage you could hope for!